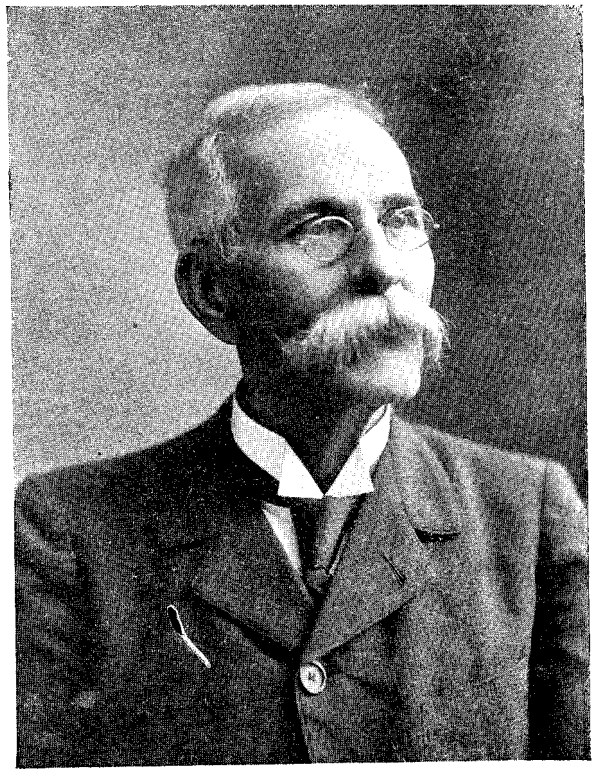
Anales del Cuarto Congreso Médico Pan-Americano

TOMO PRIMERO.

PANAMA
Chevalier, Andreve & Compañía.
1906



Dr. Manuel Amador Guerrero,

Primer Presidente de la República de Panamá, y Presidente Honorario del Cuarto Congreso Médico Pan-Americano.

DECRETO NUMERO 34 DE 1904

(DE 4 DE AGOSTO)

por el cual se nombra una Junta de Recepción de los Miembros del Congreso Médico Pan-Americano que se reunirá en esta Capital.

El Presidente de la República, en uso de sus atribuciones y

CONSIDERANDO:

Que el Comité Ejecutivo del Cuarto Congreso Médico Pan-Americano ha dirigido al Gobierno de la República comunicaciones con el objeto de que se efectúe en esta Capital la reunión de ese alto Cuerpo y para que se dicten las medidas conducentes á la formación de una Junta que dé principio á la organización de los varios ramos y secciones del Congreso,

DECRETA:

Artículo 1º—Nómbrase una Junta de Médicos encargada de la recepción de los Delegados al Cuarto Congreso Médico Pan-Americano, la cual la compondrán los señores que á continuación se expresan:

Doctor Emiliano Ponce J., Miembro de la Junta Nacional de Higiene y del Protomedicato de la República.

Doctor W. C. Gorgas, Chief Sanitary Officer, Isthmian Canal Comission, Colonel Medical Corps, U. S. Navy.

Doctor J. E. Calvo, Miembro de la Junta Nacional de Higiene y del Protomedicato de la República.

Doctor Henry R. Carter, Chief Quarantine Officer, Isthmian Canal Comisión, Surgeon U. S. Public Health Marine Hospital Service.

Doctor Mariano Gasteazoro, Miembro de la Junta Nacional de Higiene y del Protomedicato de la Repúblic.

Doctor John W. Ross, Director of Hospitals, Isthmian Canal Commission Medical Director U. S. Navy.

Doctor Julio Icaza, Doctor M. Stern, Doctor Ciro L. Urriola, Doctor Manuel Coroalles, Doctor Carlos E. Cooke, Doctor Pedro de Obarrio, Doctor Santos J. Aguilera, Doctor D. Oduber, Doctor Julio Tomaselli, Maj. Loais A. Lagarde, Doctor E. B. Herrick, Dr. L. W. Spratling, Doctor T. H. Lyster, y Doctor Lewis Balch.

Artículo 2º La mencionada Junta de recepción dictará todas las disposiciones conducentes á la organización de un Comité para atender á los asuntos relacionados con la reunión del Cuarto Congreso Médico Pan-Americano.

§ Dicho Comité se pondrá inmediatamente en comunicación con el Comité Ejecutivo Internacional de Washington, á fin de que este resuelva lo conveniente á la instalación del Congreso y dé las instrucciones del caso para fijar las tareas de éste y la distribución de ellas en los ramos y secciones necesarias.

Comuníquese y publíquese.

Dado en Panamá, á cuatro de Agosto de mil novecientos cuatro.

M. AMADOR GUERRERO.

El Secretario de Fomento,

Manuel Quintero V.

COMISION EJECUTIVA de PANAMA, R. de P.

Doctor JULIO ICAZA, Presidente.

„ MANUEL COROALLES, Vice-Presidente.

„ PEDRO de OBARRIO, Tesorero.

„ J. W. ROSS,
„ J. TOMASELLI, } *Vocales.*
„ M. GASTEAZORO,

„ JOSE E. CALVO, Secretario.

PRESIDENTES Y SECRETARIOS

DE LAS DISTINTAS SECCIONES, NOMBRADOS POR LA COMISIÓN EJECUTIVA DE PANAMÁ.

Sección de Medicina.

Presidente..... Col. W. C. Gorgas.
Secretario..... Dr. Daniel R. Oduber.

Sección de Cirugía.

Presidente..... Mayor Louis La Garde.
Secretario..... Dr. E. B. Harrick.

Sección de Higiene.

Presidente..... Col. W. C. Gorgas.
Secretario..... Dr. Henry R. Carter.

Sección de Especialidades.

Presidente..... Dr. W. Spratling.
Secretario..... Dr. Pedro de Obarrio.

SECRETARIOS

DE LAS DISTINTAS SECCIONES, NOMBRADOS POR LA COMISIÓN EJECUTIVA INTERNACIONAL DE LOS ESTADOS UNIDOS DE AMÉRICA.

Patología General.
Dr. Judson Daland, de Philadelphia, Pa. U. S. A.

Neurología.
Dr. C. H. Hughes, de St. Louis, Mo. U. S. A.

Dermatología.
Dr. Howard Morrow, de San Francisco, Cal. U. S. A.

Patología Interna.
Dr. Walter Chase, de Boston, Mass. U. S. A.

Terapéutica.
Dr. Noble P. Barnes, de Washington, D. C. U. S. A.

Cirugía General.
Dr. Rudolph Matas, de Nueva Orleans, La. U. S. A.

Cirugía Militar.
Dr. Geo. Goodfellow, de San Francisco, Cal. U. S. A.

Cirugía de Ferrocarriles.

Dr. C. W. P. Brock, de Richmond, Va. U. S. A.

Ginecología

Dr. H. P. Newman, de Chicago, Ill. U. S. A.

Obstetricia.

Dr. E. G. Zinke, de Cincinnati, Ohio. U. S. A.

Cirugía Ortopédica.

Dr. John R. Ridlon, de Chicago, Ill. U. S. A.

Higiene General, Marítima y de Cuarentenas

Dr. A. H. Doty, (Rosebank, S. I.) N. Y. U. S. A.

Oftalmología.

Dr. Burt Ellis, de los Angeles, Cal. U. S. A.

Laringología y Rinología.

Dr. G. Hudson Maknen, de Philadelphia, Pa. U. S. A.

Otología.

Dr. Frederick Jack. de Boston, Mass. U. S. A.

REGLAMENTO ESPECIAL

DEL CUARTO CONGRESO MÉDICO PAN-AMERICANO QUE SE REUNIRÁ EN LA CIUDAD DE PANAMÁ LOS DÍAS 3, 4, 5 y 6 DE ENERO DE 1905.

INSCRIPCIONES.

Art. 1º Cada miembro del Congreso, para hacer efectiva su inscripción, entregará en la ciudad de Panamá al Tesorero del Congreso la cantidad de diez pesos oro americano.

SESIONES GENERALES.

Art. 2º Habrá una sesión de apertura, una intermedia y una de clausura, de carácter puramente científico.

Art. 3º A la sesión de apertura, que será solemne y presidida por la Autoridad Suprema de la Nación, concurrirán, además de los Congresistas, los miembros de las Sociedades científicas y personas distinguidas que sean invitadas por la Comisión Organizadora. Comen-

zará la sesión con una alocución del Excelentísimo señor Presidente de la República. Seguirán dos discursos de carácter científico y el informe del Secretario General

Art. 4º En la sesión intermedia se leerán cuatro discursos sobre asuntos generales, por personas muy distinguidas en las ciencias médicas, que invitadas oportunamente hayan aceptado este cargo, y uno de esos discursos por un médico panameño, invitado por la Comisión Organizadora.

Art. 5º En la sesión de clausura el Tesorero dará cuenta al Congreso de la inversión de los fondos que se le han confiado.

Ar. 6º Se pronunciará un discurso de carácter científico, y una breve alocución por un representante de cada una de las naciones que concurran al Congreso.

Art. 7º El Secretario General dará á conocer el lugar que el Congreso señale para verificar su quinta reunión.

Art. 8º En las sesiones generales no habrá discusión.

SESIONES DE LAS SECCIONES.

Art. 9º Estas sesiones serán de 3 á 5 P. M. en los locales que designará la Comisión Organizadora. Las presidirá el Presidente efectivo de ellas, alternándose con los Vice-Presidentes de cada una de las naciones que estén representadas en cada Sección.

Art. 10. Será Secretario nato de cada sección el que nombre la Comisión Organizadora y alternará en sus funciones con los Secretarios de las naciones que estén representadas en la Sección; pero si éstos no están presentes, serán suplidos por el que nombre el Presidente efectivo.

Art. 11. El Presidente dirigirá las discusiones conforme al programa del día, y resolverá las cuestiones que

puedan suscitarse, y que no estén previstas en este Reglamento.

Art. 12. El Secretario nato formará las actas y recogerá para ello, además de sus propias notas, las de los Secretarios que hayan servido en la Sección. Recogerá también de los oradores que hayan hecho uso de la palabra los extractos escritos de que habla el artículo 19.

Art. 13. Los casos relativos al debate que no estuvieren previstos en este Reglamento, se resolverán conforme á las prácticas parlamentarias generales.

Art. 14. Las votaciones serán nominales.

MEMORIAS, SUS EXTRACTOS Y DISCUSIONES EN LAS SESIONES DE LAS SECCIONES.

Art. 15. Las memorias se presentarán por escrito.

Art. 16. Cada autor enviará al Secretario de la Comisión Organizadora á la ciudad de Panamá, antes del día 25 de Diciembre del presente año, un extracto de su memoria, el cual no excederá de 300 palabras. Estos extractos se imprimirán en inglés y en español, y se distribuirán á los Congresistas, antes de las sesiones en que deban leerse.

Art. 17. No se anunciará ninguna memoria á la cual no se haya acompañado su extracto; los autores que cumplan esta condición tendrán derecho á que se publiquen íntegras en las memorias del Congreso.

Art. 18. En las sesiones, la lectura de las memorias no durará más de 20 minutos. Cuando éstas sean tan largas que no puedan leerse en ese tiempo los autores las extractarán, ya sea por escrito ó de palabra, pero se publicarán íntegras en las actas del Congreso, en el idioma en que se hayan escrito.

Art. 19. Los extractos á que se refiere el artículo anterior se entregarán, en unión de las memorias, al Secretario de la sección á que correspondan.

Art. 20. Los miembros del Congreso que tomaren parte en las discusiones de cada Sección presentarán sus discursos escritos, al terminar la sesión, al Secretario respectivo, y se publicarán también en las actas.

Art. 21. Las memorias anunciadas para su lectura en el programa diario de cada Sección, servirán de tema á las discusiones. En éstas cada orador no podrá usar de la palabra más que una sola vez y durante cinco minutos, pero al autor de la memoria que origine la discusión, se le permitirá replicar si lo cree necesario, por una sola vez y sólo durante diez minutos.

COMISIÓN EJECUTIVA.

Art. 22. La Comisión Ejecutiva queda constituída por tres señores Vocales incluyendo al Presidente, al Vice-Presidente, al Secretario y al Tesorero, nombrada por una Junta de Médicos, encargada de la recepción en Panamá de los señores Delegados al 4º Congreso Médico Pan-Americano. Esta Comisión Ejecutiva se ocupará en todo lo relativo á los asuntos del Congreso.

Panamá, Noviembre de 1904.

El Presidente,

JULIO ICAZA.

El Secretario General,

José E. Calvo.

DISCURSO

PRONUNCIADO POR EL PRESIDENTE DE LA REPÚBLICA, DOCTOR M. AMADOR GUERRERO, LA NOCHE DE APERTURA DEL CONGRESO.

Señoras, Señores:

La designación de esta ciudad hecha por vosotros, para celebrar en ella la reunión de tan distinguidos co-profesores, es un alto honor para el Gobierno y pueblo de esta pequeña República, así como también lo es para mí el presidir la instalación de este Congreso, que cuenta en su seno número tan considerable de ilustres colegas.

Deseo sinceramente obtengáis los más benéficos resultados en tan noble tarea y confío en que cosecharéis el mayor fruto posible, para bien del género humano, especialmente al tratar—como trataréis—de aquellas enfermedades que llenan de exagerado temor á los extrangeros que llegan al Istmo: la fiebre amarilla y la malaria.

Señores: queda abierto el Cuarto Congreso Médico Americano.

SANITARY CONDITIONS

AS ENCOUNTERED IN CUBA AND PANAMA, AND WHAT IS BEING DONE TO RENDER THE CANAL ZONE HEALTHY.

By WILLIAM C. GORGAS, M. D.
Colonel and Surgeon United States Army.

I will not dwell, to any extent, upon the sanitary conditions of Cuba. They are pretty well known, and I do not think they would interest this audience as much as conditions at Panama; and the cause of our interest in Cuba was entirely different from those that now arouse our interest at Panama.

For two centuries the United States had been more or less scourged with yellow fever, which had generally been imported from Havana. Besides the loss of life, the commercial losses had been enormous. At the time of our occupation of Cuba, there was a perfectly cast iron commercial quarantine against the West Indies, in all the Gulf ports, during every summer; and every few

years, when yellow fever, in spite of these precautions would get into the United States, there would be the same inflexible quarantines between the various States along the Gulf coast and the various cities of that section. We had believed, for a generation or two, that if, in any way, we could get rid of yellow fever in Havana, yellow fever would cease to be a menace to our Southern States. So that, practically, the sanitation of Cuba centered about the sanitation of Havana; and the sanitation of Havana, in our mind, consisted almost entirely in sanitation with regard to yellow fever. We then believed that if any disease was caused by filth yellow fever was that disease; and all our thoughts and all our efforts were centered about cleaning up.

For over two years we cleaned most industriously. I do not think there ever was a city in the history of the world that for two years and a half was so industriously swept, scrubbed, and cleaned from one end to the other and from top to bottom, as Havana was. As I look back upon it now, I am inclined to agree with the estimate that the natives put upon us. I one day went into the patio of a large tenement house that was being fumigated, scrubbed, cleaned, and whitewashed from top to bottom.

Some thirty or forty men were hard at work doing this in the most industrious manner. The poor people had all their belongings placed out in the patio, and were themselves sitting about in the most uncomfortable and disconsolate way. As I was standing looking on, a man who had evidently just come in and did not understand what was going on, asked his wife what it all meant. She replied, in a good-natured way, that she did not know, but that it was "just one of the ways of those crazy Americans." Her good nature made quite an impression upon me. She evi-

dently had no particular sympathy with what we were doing, but had a general idea that we were trying to do it for their good, notwithstanding that she considered it as one of our extreme and crazy ideas; and, as things turned out, she was nearer right than we were.

In time, Reed's Army Medical Board came along and made the astounding discovery that the mosquito alone conveyed yellow fever, and that dirt and filth had very little, if anything, to do with the question.

My good friend Dr. Finlay, whom I am glad to see here with us to-night, some twenty years before had advanced this same theory, and during the twenty years preceding our occupation of the island had written and advocated the theory continuously. I had often heard him expound his views on the subject, but, like the like Cuban woman, I smiled in a superior way at the "crazy Cuban doctor". But Dr. Finlay has had the good fortune (such as has fallen to few great men) to live to see his theories recognised and adopted by all the world.

Even after the discovery of the cause of yellow fever, it did not seem that we were any nearer the prevention of the disease.

Though we knew that the mosquito was the cause of the disease, no feasible way of putting this knowledge to practical application was evident. It is not generally known that our first practical tests were in the way of inoculation and not a mosquito destruction. We thought that the most successful thing would be to give people mild attacks of yellow fever by biting them with infected mosquitos, and thus, gradually and safely, make all newcomers immunes by giving them the disease. We attempted it on a large scale, established

an inoculation station and went to work; but three fatal cases early in our operation showed us that the method was exceedingly dangerous and that we would have to give it up.

We then turned our attention to mosquito destruction in its various forms, and screened those suffe ring from yellow fever and suspects of all kinds; and in this we had the most unexpected and remarkable success. In less than a year, the city was entirely free from yellow fever; and since September, 1901, now more than three years ago, not a single case of yellow fever has originated in Havana. Since May, 1902, the Cubans themselves have carried on this work, under the able direction of Dr. Finlay, who is at present the Chief Sanitary Officer of the island; and it is due to their excellent care and management that the disease has not been reintroduced. Dr, Finlay can tell you that most every month they get a case or two of yellow fever coming by ship from some one of the infected ports around them, and that they bring the patients to the yellow fever hospital, right in the heart of the city, and there care for them. They simply screen the sick person so that no Havana mosquito can bite him, and, with this simple protection, they take care of the patient exactly as we in the United States would care for a case of typhoid fever and fear it no more than we do typhoid fever.

We came to Panama primarily to build the Panama canal, and the sanitary department is established for the purpose of carrying through this work with as little loss of life as possible. The history of the work of construction of the railroad and of attempts at the canal has been darkened by an excessive loss of human life. We hope greatly to lessen this loss, if not entirely do away with it.

In looking back over the history of the Isthmus as far as we can get reliable statistics on the subject, malaria and yellow fever have played the greatest part in the mortality. So far as yellow fever is concerned, it seems to me that the problem is not so difficult as it was at Havana; and I believe that, with reasonable effort and reasonable expenditure of money, we can accomplish in Panama and Colon the same results as were accomplished in Havana and by much the same methods. If we had only the same knowledge of yellow fever in coming to Panama that we had in going to Cuba in 1898, I would look upon yellow fever as much the most important disease of the two, from a sanitary standpoint; but, without present knowledge of the subject, I dismiss it as settled that we eliminate yellow fever. If we do not, some one will certainly be at fault and should be held strictly accountable for it; and I have not the least doubt in my mind but that the guilty individual will have an exceedingly lively time of it.

But malaria on the Istmus and malaria at Havana are very different problems. Malaria, in a big city, is principally a disease of the suburbs, and as the breeding places for Anopheles are not very extensive in the suburbs of a large city, the work of eradicating these breeding places is not so great a problem. And even when Anopheles are bred, only a small part of the human population is infected; so that a good many mosquitos will bite before one happens to strike an infected individual and thus get the contagion. While our efforts at Havana were not directed particularly against malaria, the same work that destroyed the yellow fever mosquito at the same time destroyed the malaria mosquito; and we practically eliminated malaria from Havana without particularly intending so to do, by the same works that got rid of yellow fever–

simply the destruction of the breeding places of the Anopheles mosquito.

But on the Istmus I find conditions very different. We have a long line of canal with twenty odd villages and some twelve thousand people scattered over a length of nearly fifty miles. We find that most of these twelve thousand people are capable of conveying the contagion of malaria to any new-comer who comes to live among them. By actual microscopical examination of the blood of several hundred of these people, we find that over 70 per cent. have the malaria parasite circulating in their blood; and this on a single examination. The percentage would probably be very much higher if we made a second or third examination of the 30 percent. who are found uninfected at the first examination.

This means that practically every female Anopheles mosquito that bites a human being along the line of the canal becomes infected, and our examination has further shown that there is no lack of Anopheles mosquitoes. I suppose it is no exageration to say that any man who spends a night in one of these villages will contract malaria.

Our examinations have further shown that the kind of parasite discovered in these cases is not the parasite of the ordinary chills and fever, known as the tertian and quartan, but the parasite that causes the deadly Chagres fever, known as the estivo-autumnal parasite. Probably 80 per cent of the infected individuals examined were infected with the Chagres or estivo-autumnal parasite. This will give you some idea of the conditions as to malaria which we are attacking.

Our plan along the canal is, in general as follows: To eliminate all possible breeding places for Anopheles near villages or dwellings along the canal. This we

expect to do principally by superficial drainage. As you see in going over the railroad, we have already made considerable headway in this direction. I think any one who has never tried it would be surprised at the effect a little work around an unhealthy locality will have in doing away with the different species of mosquitos that are night travelers, such as the Stegomyia and Anopheles. Ancon Hospital, which six months ago was a pretty bad locality, is almost entirely free.

At my own quarters, I scarcely ever see a mosquito.

We are also going to try to do all we can towards freeing the inhabitants along the line of the canal at present infected, from contagion. We are establishing, as rapidly as we able, dispensaries at various points, under the charge of competent physicians, who will treat natives and endeavor in every way possible to get them to take quinine regularly.

By these two methods, viz., by decreasing as much as possible the number of instances of malaria bearing mosquitos and on the other hand, by decreasing as much as possible the number of instances of malaria-infected natives, we hope to bring it about that when the large influx of laborers comes to the canal there will not be so general a malarial infection among the newcomers as there was among the French, for instance, in the days gone by.

If in Havana, by mosquito work alone, we practically succeeded in eliminating malaria, or if at Ismailia, on the Suez canal, under the advice of Dr. Ronald Ross, by mosquito work alone, malaria was entirely stamped out, I feel very confident that by the two methods combined, we ought to have a considerable degree of success at Panama. If, on the one hand, we could get rid of every Anopheles along the line of the canal, and, on the other hand, cure every human being

of the infection, we would surely be entirely successful and have no malaria at Panama. While, in all probability, such complete success is not possible within any short time, we will approximate this idea of a perfect condition just in proportion to the amount of labor and money we are willing to spend in the attempt.

Personally, I approach the problem with great hope of success.

While this malarial question is a great and overshadowing sanitary problem at Panama, many other things have to be attended to as important adjuncts in the sanitary department-things that, if left undone, would bring upon us calamities far greater than malaria. We have organized, under the able and skilful management of Dr. H. R. Carter, of the Public Health and Marine Hospital Service, a most efficient maritime sanitary service. With this service in full operation, as it is at present at both Colon and Panama, I feel reasonably certain that infectious diseases from the outside will not be introduced. On the Pacific side, on the West coast of South America, we have many ports infected with plague and several infected with yellow fever, from which it is Dr. Carter's, duty to see that we do not import those diseases. On the Atlantic side, both above us and below us we have yellow fever infected ports; and, as most of our immigrants come through the port of Colon, Dr. Carter has to keep a vigilant eye open to see that no smallpox is introduced.

The Panama government, by degree of President Amador, has made me the Health Officer of Panama and Colon, and authorized me to make such sanitary regulations as may be necessary to enforce proper sanitation in these towns. Dr- Balch, Health Officer of Panama, under this decree, is organizing a health department for the city of Panama; and Dr. Spratling under the

same authority, is doing the same for the town of Colon.

Along the Zone, where the mosquito work is all important, Mr. Le Prince has already organized a very efficient mosquito service. Mr. Le Prince organized and carried into effect our mosquito work at Havana.

Four-fifths of the expenses of the sanitary department are concerned in the care of the sick. The Commission, as a sanitary measure, has wisely determined to care for all the sick of Panama, Colon, and the Zone. This important service is being organized by Dr. John W. Ross of the Navy, and his department has charge of all the hospitals, dispensaries, and everything pertaining to the care of the sick. We have under way at present a 100-bed hospital, on the Island of Taboga, a most salubrious and attractrive location, where we expect to care for the severer cases, during convalescence and thus make room at the hospitals on the mainland.

At Ancon Hospital, in the suburbs of the city of Panama and located on the side of Ancon Hill, we have our principal hospital, which is at present in active operation under the superintendence of Major La Garde, of the Army. At Miraflores, we have a 100-bed hospital for chronic cases, insane and lepers, under the care of Doctor Bates.

Along the line of the canal, we have three smaller hospitals, at Culebra, Gorgona, and Bohio, under the charge of competent medical officers.

At Colon, we have a hospital in operation which, in a short time, we expect to have equipped with 300 beds. Besides these hospitals, we have several dispensaries at other points along the line, under the charge of various medical officers.

In the grounds of Ancon Hospital, we have a general laboratory, under the direction of Drs. Herrick

and Kendall-both Johns Hopkins men, well equipped for the work and for such laboratory investigation as is cognate to sanitary work. As it goes on and we see our opportunities for extension, we hope to develop the laboratory work into a more general field of tropical investigation; and in this way we have great hope of doing something that may be of great interest to the medical profession at large. I think I have now given a brief outline of the subject on which I was asked to talk to this meeting. At present I can only point out what we hope to accomplish and what results may reasonably be espected to come from our efforts. A year or two from now I hope I may be able to write another paper on the subject of what has been accomplished at Panama in the way of eradicating malaria and yellow fever, and I trust that a comparison of the two papers will not show too great a discrepancy between my hopes and my realizations.

ADDRESS

DELIVERED AT THE OPENING OF PAN-AMERICAN MEDICAL CONGRESS AT PANAMA, JANUARY 3, 1905,
BY TRACY ROBINSON.

Mr. President, Ladies and Gentlemen:—

As part of this welcome, I am requested to make a small talk, more or less under the head of "remarks as to the progress on the Isthmus in the last 30 years, specially in connection with canal matters."

Permit me, within the latitude of more or less, to go back a little, to the opening of the Panama Railroad, on the 31st of January, 1855. This, next to the discovery of the Pacific by Balboa, was the most important event that had occurred on Isthmian soil. The last rail was laid at the summit of the Sierras, now known as Culebra, in the darkness of night, under a dramatic combination of thunder, lightning, rain, weariness, champagne and joy. After incredible vicissitudes of labor, exposure, sickness, lack of funds, lack of confidence, lack of everything, the work had

been completed, and from that day for fifty years trains of passengers and merchandise have passed with regularity and safety from ocean to ocean. For fourteen years phenomenal results had been obtained, culminating at last in net earnings of four millions dollars gold a year. But there had been a fatal defect in the first contract made by John L. Stephens with the government of New Granada, at Bogota. Not realizing the vast importance the railroad enterprise would assume, he asked for and obtained a concession for forty-nine years only, upon terms which proved very short-sighted. It was stipulated and agreed for one thing that after 20 years from the opening of the road for traffic, the government of New Granada should have the right to take possession of the same upon payment of five millions of dollars, representing at that time the entire paid-up share capital of the Company. It soon became too evident that this provision would be taken advantage of, since there were capitalists ready and eager to advance the government of New Granada the money, and in 1867, eight years sooner than the expiration of the term specified, Col, George M. Totten, Chief Engineer, and Mr. William Nelson, Commercial Agent of the railroad at Panama, were sent to Bogota with instructions to make the best terms possible for an extension of the concession. They remained at the capital several months, and at length succeeded in making a contract for the term of 99 years, with conditions far less favorable to the company, except in length of time, than those contained in the original one. For this concession the Railroad Company paid one million dollars gold, became responsible for an annual subsidy of $250,000 also in gold and assumed other minor obligations.

Scarcely had this been done when the overland connection, from Omaha to San Francisco was completed (in 1869) and the prosperity of the Panama route waned. The passenger traffic especially was greatly reduced.

Canal talk was always in the air during these years, and in 1869 General Stephen A. Hurlbut was sent by President Grant to Bogota as United States Minister Plenipotentiary and Envoy Extraordinary, charged with the power and duty to make a Canal treaty. General Grant, triumphant in war, sought to add to his fame the lovelier laurels of peace. Early in 1870 the treaty had been concluded and a copy sent by Genl. Hurlbut to Hamilton Fish, Secretary of State. It was duly delivered to General Grant and by him presented to the Senate of the United States with a laconic message that it was sent "for ratification." His message said no word of rejection. It probably did not occur to him that it could be rejected. But befere any action could be taken by the U. S. Senate, news came from Bogota that the treaty had been so modified by the Colombian Congress as to kill it. Forerunner of the fate of the Hay-Herran treaty! Genl. Grant then turned to Nicaragua as Hobson's choice.

Then came Lieut. Lucien Napoleon Bonaparte Wyse, who in 1877-8 made a so-called survey, and a canal treaty with the Colombian Government, which he sold to the company organized in 1879 by M. de Lesseps, for ten million francs.

The world then saw a wonderful display of how not to do it! After about 8 years of utter recklessness, mixed with fraud and folly, the crash came in which many millions were lost.

It must be said however, that Count de Lesseps was guilty only of being an enthusiast. He was not an engineer and man of affairs. He was led blindly by those who should have known better into the disaster that befell. He was no doubt honest, but his judgement was overborne by his ambition. It is now known how disastrously!

During the French Canal times, as the period is called, we thought ourselves at the very height and pinnacle of

prosperity. We believed the Chagres to be another Pactolus, down the turbulent current of which gold would not cease to flow. For a time fickle fortune honeymooned with us. A delirious Mistake! We were soon divorced! From the mad scramble, only a few, a very few, more cool and crafty, *escaped with loot.*

But has there been any *real* "progress on the Isthmus, in the last 30 years," as my text might imply? I fear not.

The French Canal direction had bought nearly all of the Panama Railroad shares of $100.00 each, which had been increased from 50,000 to 70,000, at $250 per share, and besides the transportation business, incident to the work going forward on the Canal, there was always an increasing volume of merchandise traffic to and from the West Coast of both North and South America. But that this activity, with the money it involved, benefitted the Isthmus permanently I do not believe. It proved a curse rather than a blessing. The great companies, including the railroad, proclaimed by word as well as by plentiful lack of deed, that they were not here as benevolent institutions. In this out-of-the-way place it was not regarded essential to see after the well being of "our neighbour." The warm remark ascribed to a great American millionaire, in regard to "the public," found its echo here on the Isthmus. Early and late no interest has been manifested in the progress and prosperity of the country through which the Panama Railroad runs. For 50 years it has been considered expedient to stand at this great international toll-gate, a sordid discriminating obstruction rather than and aid, an insolent monopolistic hindrance, instead of a help. This is history not criticism. Fact not fiction. If you should see the condition of Colon and of Mount Hope Cemetery, both virtually owned by the Railroad Company, and should note the wild state of the entire country along the line, my words would need no other confirmation. Another fatal

drawback has been the instability of the Government. The number of revolutions or disturbances of the public peace during the last 50 years has been at least half a hundred. As the daughter of a turbulent mother Panama has no cause to love Colombia.

Progress on the Isthmus! I could better tell you of its absence. It would be easier, though far sorrowfuller, to point out that while all the world advanced along the great highway of material prosperity, this Isthmus retrograded. It did not merely stand still. But a change came when on the 3rd of November 1903, quietly, without bloodshed, almost without excitement, the Republic of Panama was proclaimed.

Hope came once more to hearts that had well-nigh ceased to hope. A whirlwind of new anticipations bearing the impress and promise of early fulfilment, swept down upon us with bewildering force. When our sky was blackest a very tempest of good fortune dispelled the clouds.

Emancipation is a great word, but it is not too great to use when describing the new birth, the new state of being, that came to this Isthmus upon the day that our beloved Doctor-President and his patriotic associates, at the risk of life, made their Declaration of Independence. Emancipated on that day from the tyranny that made of her an unwilling slave, Panama took her place in the firmament of nations like a "Star of the morning!"

The change came suddenly, so suddenly that it had not been strange if a very vertigo of gladness had seized upon the young Republic.

The world knows that which followed. The friend in need has been the friend in deed and will continue to be so. Well may Isthmians forget the past, or remember it as cruelty is remembered, as ill-fortune is remembered, as bondage is remembered, as all things evil are remembered

from which men have made their escape, even as Hades may be remembered by the ransomed. The future is now assured.

But I have wandered rather far afield. My roving commission of more or less, may now permit a return to the present matter in hand; the opening of this Fourth Pan-American Medical Congress. To say that it is a great event, but poorly states the fact. In itself a modest gathering, its meaning and the hopes which shall spring from it will be unmeasurable.

No arithmetic can count the harvest of beneficence that shall come of it. The honored disciples of Aesculapius whom I have the honor to address, members of the great and glorious guild that holds in sacred keeping the high and noble art of healing, men who by heredity of spirit are descended from the great Apollo, most nobly versatile of all the Olympian gods, need no eulogy of mine. It is beyond my power to bestow any least honor. But standing here at the meeting of the continents, where the world is soon to see the mighty oceans joined, I would make bold to herald, if I could, to the two Americas the joy which the meeting of this congress gives us. Panama has hitherto been poor and neglected. The humanities have passed her by. Art, science, learning, in any wide sense, have been conspicuous only by their absence. Scholarship is only the echo of a name that has no meaning in our ears.

And yet I here stand up for Panama. I believe that Panama under American guarantee of good government will some day be an object-lesson to the world. Not tomorrow, not next year; but, Time, the best friend and greatest healer of all, will surely be her benefactor. I have an affection for the Isthmus. If more than forty years could make me one, I would be an Istmeño. I join my sunburnt brothers to form a cordon of welcome, to extend the glad

hand to this congress, to bid the members of it feel that they are among friends. To ask them to accept as no mere Spanish politeness, but as the genuine expression of the warm tropical heart, the offer of hospitality that is extended. They need have no fear. If no other contribution can be made, of any value, by those who, like myself are short on medical lore, they shall at least have leave to draw on our reserve fund of daily experience. That will tell and tell truly how false are the tales of danger and death from the Panama climate. It will bear witness, for example, that there has never been on the Isthmus a real epidemic of yellow fever in the last 50 years. Many have died of that disease, but it has never become general or epidemic as we understand the word. And the old crosstie myth that has been repeated over the world thousands of times, will be narrowed down to twelve hundred deaths in 5 years of toil, out of a total of six thousand men employed in the construction of the Panama road. In short much knowledge of unscientific kind, but of value, may thus be gained regarding Isthmian health conditions. More, infinitely more, will be learned from the corps of distinguished Sanitarians already hard at work here. That which they have done and have planned to do, to free the cities of Colon and Panama and the Canal Zone from the scourge of tropical malaria, excites the keenest interest and approval. They belong to the race of up-to-date "Medicine men," who are the true missionaries, to and through whom the tropics especially, must look for salvation. The ethical portent of the doctrine. "*Mens sana in corpore sano*," of which these missionaries are the evangel, is of profound importance; an importance so far-reaching that it shall not perhaps be fully apprehended before

> ——"the sun grows cold
> And the stars are old
> And the leaves of the Judgement Book unfold."

The trained physician leads the van. More and more

he shall be the pilot, the Captain in the battle of scientific civilization, against the host of bigotry and ignorance. For he, unafraid.

"Doth rend the rocks for secred fountains
And pursue the track of the illimitable winds for mysteries."

He shall be the enlightened pioneer and true leader of mankind. It was said recently by the President of a leading Western University, in a public address, that he believed the time is coming when all young men would receive a College or University education. The hope that all men and women of culture shall have knowledge of the Art of Healing is not so extravagant. "Know thyself" would then cease to be an idle command. And this may be said of the Sanitary department of the great Canal. It is performing an immense duty. It is clearing the way for the unobstructed march of the grand army of workers, that, directed by President, War Secretary and Commission, under the immediate personal command of a great Captain of Industry, perhaps the greatest, and all within the wondrous overlook and care of the Supreme Intelligence.

———whose might
Swayeth the boundless universe aright
And yet doth paint the lily in its pride,

shall hasten the happy day on which a splendid tide-water channel shall be opened from ocean to ocean, and great proud ships shall be passing freely to an fro,

"Veering through the parted Andes
While the Nations cheer!"

DISCURSO

LEÍDO EN LA SESIÓN DE INAUGURACIÓN, POR EL SECRETARIO DEL CONGRESO, DOCTOR JOSÉ E. CALVO.

Señor Presidente, Señores Congresistas:

Cumplo el deber reglamentario de informaros, en mi carácter de Secretario General de la Comisión Organizadora de este Congreso, acerca de los trabajos hasta ahora ejecutados para su realización.

En los primeros días de 1901 celebróse en la Habana, bajo valiosa cooperación de los eminentes profesores Juan Santos Fernández y Tomás V. Coronado, el tercer Congreso Médico Pan-Americano, el mismo que dejó de verificarse en Caracas con motivo de la guerra civil que ensangrentaba la República de Venezuela.

Pocos días contábamos aún de vida independiente, casi á raíz del glorioso 3 de Noviembre, y apenas iniciado el progresista Gobierno del benemérito doctor Amador Guerrero, padre y fundador de la República y digno Presidente de éste Congreso, cuando se recibió por conduc-

to del entonces Secretario de Gobierno y Relaciones Exteriores don Tomás Arias, la galante invitación del Ministro americano Mr. Buchanan, para que se celebrara en esta ciudad el cuarto Congreso Médico Pan-Americano.

No obstante las anormales circunstancias por que atravesaba el país en los albores de su existencia, nuestro ilustrado Presidente no vaciló un solo instante en aceptar tan honrosa como obligante invitación, pues, si según ha dicho alguien, los deberes no se renuncian, momentos hay, y este es uno de ellos, en que los honores tambien son indeclinables.

Tal es, señores, y no otra, la única razón plausible que nos ha alentado á dar hospitalidad en nuestra metrópoli á huespedes tan ilustres por su ciencia como por la entidad que venís á representar.

Si nuestra pequeña capital no puede ofreceros los encantos y comodidades, el lujo y la magnificencia de las grandes ciudades, encontraréis en ella en cambio un pueblo orgulloso de vuestra visita, corazones abiertos á vuestra amistad, espíritus anhelantes de vuestras luces. En vez de bronces y mármoles, suntuosidades y galas, la República de Panamá ostenta la sencillez de su naturaleza virgen, la riqueza de su fauna y la exquisita variedad de su flora no profanadas aún por el ojo del naturalista, y, más que todo, los expléndidos horizontes que le brinda la brillante posición topográfica con que la Providencia le plugo favorecerla, y á la cual debe, acaso en primer término, el señalado honor de vuestra visita.

Ella misma se os ofrece, en fin, parafraseando al eminente Cantú, como la inmensa pizarra sobre la cual venís á escribir vosotros las ecuaciones del progreso.

Si nuestra pequeñez é incipiencia hacen notable contraste con la grandeza y los adelantos alcanzados por

José E. Calvo

Secretario Genreal del Cuarto Congreso Médico Pan-Americano.

vosotros, los honores y beneficios de que en la actualidad disfrutamos, también contrastan igualmente con nuestros escasos merecimientos. Es que la ley de la compensación tiene ahora aquí, como en todas circunstancias, su más cabal cumplimiento.

Séame permitido, pues, presentaros á nombre de nuestro Gobierno. de mis estimables colegas y en el mío propio, nuestras congratulaciones y agradecimientos por tan marcada muestra de espontánea simpatía.

Hecha esta indispensable advertencia, voy, con vuestro permiso, á daros cuenta del resultado de nuestras labores.

Han correspondido á la invitación hecha por el Señor Secretario de Fomento y Obras Públicas, las Repúblicas de México, Guatemala, Honduras, Costa Rica, Santo Domingo, Perú, los Estados Unidos de América, y Puerto Rico.

Han enviado Delegados oficiales las Repúblicas de México, Guatemala, Honduras, Estados Unidos de América, Cuba, Santo Domingo, Perú, y Puerto Rico.

Han enviado Delegados especiales las siguientes sociedades Científicas: la Facultad Médica de Costa Rica y la Academia de Ciencias Médicas, Físicas y Naturales de la Habana.

Han ofrecido asistir 200 médicos de los Estados Unidos y la América Central.

Se ha prometido la lectura de 86 memorias. Los trabajos más numerosos corresponden á la sección de cirujía.

Tal es, en síntesis, el acopio de trabajos con que iniciará sus tareas el cuarto Congreso Médico Pan-Américano. Grato me es anunciaros y de ello tendréis ocasión de convenceros muy en breve, que muchas de las

memorias presentadas revisten la mayor importancia tanto por su erudición y oportunidad como por la aplicación práctica que ha de tener á las necesidades del momento.

A pesar de lo angustioso del tiempo de que hemos podido disponer, sumamente corto por las dilatadas comunicaciones, placentero es reconocer que hemos sido favorecidos con un respetable cuerpo de comprofesoros que si no iguala en número, rivaliza en calidad á los anteriores Congresos de este género.

Réstame, para concluír, desearos la más grata permanencia entre nosotros y que al regresar á vuestros hogares merezcamos un rincón en vuestros recuerdos los hijos de la más joven de las Repúblicas de este Continente.

Hago votos al Sér Supremo porque os ilumine en vuestras importantes tareas.

Señoras y señores Congresistas: Bien venidos seáis.

DISCURSO

PRONUNCIADO POR EL ESTIMABLE MÉDICO NACIONAL DOCTOR SANTOS J. AGUILERA EN LA SESIÓN DE CLAUSURA DEL 4.º CONGRESO MÉDICO PAN-AMERICANO, CELEBRADO AQUÍ RECIENTEMENTE, Y QUE DEBIDO Á LA PREMURA DEL CIERRE NO LE FUÉ DABLE HACERLO.

Señor Presidente del Congreso, Honorables miembros del Congreso Pan-Americano, Señores:

Distinguido por la bondad de mis honorables colegas de esta ciudad para llevar la palabra en ocasión tan solemne como la presente, vengo á cumplir la honrosa distinción que se me ha confiado, no sin sentirme profundamente conmovido por la tarea que se me ha impuesto, yá porque la escasez de bríos intelectuales supera la solemnidad del acto, cuanto por que la magnitud del objeto que nos ha consagrado en este recinto, es la condensación del sabio principio latino: "Salux populis suprema lex".

No es el móvil que anima ó entrañan las Asambleas y Congresos ordinarios de todas las naciones libres, el que aquí nos reune para dar forma y vida á éste ó aquél sistema de Gobierno, no, señores: son otros móviles que si bien se tocan en varios puntos, jamás se confunden.

Es la asociación de los hermanos en el sentir y en el pensar; es la hermandad que lucha en todo tiempo, en todo clima con las causas genitoras de nuestros males; son los portadores de la esperanza al lecho del dolor; son los que saben despreciar su existencia misma, en pro de las dolencias ajenas, los que aquí se han dado cita para buscar más luz en la escabrosa senda que transitamos. El Istmo de Panamá, puente del Universo como galantemente lo apellidó nuestro inmortal Bolívar, se siente hoy justamente orgulloso al ser distinguido por los miembros del Congreso Pan-Americano para celebrar su cuarta reunión en su ciudad capital.

Lamentamos sí, en el fondo de nuestra alma y en especial el Cuerpo Médico del Istmo, que ésta augusta Asamblea haya sido convocada tan prematuramente para celebrar sus reuniones entre nosotros, porque las condiciones climatológicas nuestras exijen mucho más tiempo que las homólogas de las zonas templadas y frías, para dar vida y forma á los estudios serios y científicos, y tal premura ha privado á muchos de nuestros colegas de la satisfacción de cumplir con el deber de denunciar á la ciencia lo mucho que se oculta entre nosotros, en el lecho del dolor.

Pero ya que la suerte nuestra ha sido tan especial, nosotros cumplimos con presentar lo escaso que se ha podido hacer en tan limitado tiempo, en la confianza de que nuestros sabios compañeros sabrán hacernos justicia en sus apreciaciones y que no llevarán de nosotros la desconsoladora impresión del vate que dijo: "*tan sólo espinos los espinos dan*".

Nosotros sabremos hacernos dignos del alto honor que se nos ha dispensado como nación independiente, cuando apenas comienza sus primeros pasos en el camino de la pubertad: nosotros conservaremos grabados con caracteres indelebles en nuestros corazones las sabias enseñanzas que se desprendan de esta comunión de pensamientos, de aspiraciones y hasta de amarguras profesionales.

Nosotros procuraremos recoger con avidez toda enseñanza que se desprenda de este gimnasio intelectual, ungido con los vivos resplandores que nos traen los cerebros bautizados con los últimos adelantos científicos en el Siglo XIX que se ocultó ya en las sombras del pasado.

Para sacar todo el fruto posible que ha de surgir de esta asociación, no ha de influír en sus resultados el hecho de la heterogeneidad, pues si en realidad hay aparente diferencia, en el fondo existe unidad de principios y de aspiraciones, hay el vehemente deseo de que la humanidad que sufre y llora las miserias inherentes á su complicado organismo, se independice más y más de las causas que son amenaza constante del funcionamiento armónico de la vida. También las aguas dulces del inmenso caudal de nuestros ríos se mezclan constantemente á la inmensidad de nuestros mares, para luego convertirse en lluvia fecundante que fertiliza nuestros campos.

Que sea pues esta acción la mezcla real y provechosa de nuestras nobles aspiraciones.---Que surja de ella la lluvia benéfica y consoladora de los que sufren---y así habremos conseguido aumentar una nota más, en pro de la humanidad, yá á las alcanzadas por los Congresos anteriores.

SOME GYNECOLOGIC SUPERSTITIONS [1]

BY LUCY WAITE, B. A., M. D., OF CHICAGO. HEAD SURGEON OF THE MARY THOMPSON HOSPITAL.

In reviewing the history of the gradual rise and establishment of the specialty of diseases of women, one cannot fail to be forcibly impressed with the fact that it has been encumbered with numerous dogmatic theories, which have been stated and restated so many times that they have been finally accepted by the profession without question and have become veritable superstitions. This may be in part responsible for the rocky road which this branch of medicine and surgery has traveled. Occasionally some venturesome spirit has arisen and overthrown a deep-rooted superstition, but unfortunately, many remain to bar the way to progress and to the establishment of this department of medicine as one of the legitimate specialties.

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(1) Read before the Pan-American Medical Congress at Panama, January 5, 1905.

We have heard much in these latter days of the "passing of gynecology," but our critics have mistaken the healthful struggles of this young giant for the death agony. Gynecology has come to stay, but gynecologists have a task before them. So long as they are content to accept without question the superstitions handed down by their predecessors and make no effort to prove or disprove them, just so long will we hear of the passing of gynecology. It is for them to blaze the way for others to follow, and not be contented to accept meekly the dictum of those who make gynecology the least important part of their studies. In no other branch of medicine or surgery is there so great need for careful, conscientious, and special study and research as in the diseases which afflict womankind. Too long she has been the victim of false theories and irrational methods, and who is to rescue her from this bondage but those who have devoted their time and energies to her service.

Perhaps no dogmatic statement ever uttered in our profession has taken such a firm hold on the medical mind and has been so difficult to dislodge as that establishing the so called normal position of the uterus. Once accepted that the normally placed uterus must be in anteversion, all gynecology has been attuned to this idea, and innumerable textbooks by schematic representations of the "nomal" and "abnormal" position of the uterus, have engraved this superstition on the eye as well as upon the mind. So firmly has this idea become rooted that, in spite of the fact that German scientists have proved by actual demonstration and numerous clinical observations that the normal sized nonmetritis movable uterus may lie in any position in the pelvis without producing symptoms, women are still being tormented with pessaries, and abdomens are being opened by thousands, to force this inoffensive organ to assume a

position which shall correspond to the one photographed in the gynecologic brain.

As a result of this arbitrary establishment of the position of the uterus, a second dogmatic assertion has taken almost an equal stronghold on the profession, and is very closely allied to the first, namely, that retrodeviations of the uterus are a cause of constipation. No effort has ever been made to prove this proposition and still it has been most generally accepted. Indeed, it seems almost a pity to be obliged to give up this particular superstition because it appears so plausible and is always so satisfactory to the patient. My attention was first called to this matter in dissections on the abdomen and pelvis. In over 20 bodies, I experimented by packing the rectum and sigmoid with cotton, and found that these organs could be enormously distended without crowding the uterus and that it rode upward and forward obedient to the increasing size of the rectum without making the slightest anatomic protest. Practically the same result followed the distention of the bladder with air. The uterus assumed a retroposition and became gradually more elevated as the size of the bladder increased without any anatomic hindrance, the roomy pelvis accommodating, without any apparent inconvenience, the full rectum and distended bladder with the elevated and retroplaced uterus between them. I therefore concluded that if the uterus was in any way responsible for constipation in women, it was not on account of direct pressure due to any particular position which it might happen to assume.

Since my dissections, I have had the opportunity to confirm this by observations on hundreds of clinical cases. I found, to be sure, constipation a very common complication in pelvic diseases, but relatively not much more frequent in retropositions than in antepositions,

and very often absent in the former and present in the latter condition.

The following 500 cases were taken from over 3,000 tabulated clinical cases; They are, of course, consecutive cases, as the patients presented themselves in the clinic. The uterus was found in anteposition in 290 cases (60 per cent), in retroposition in 210 (40 per cent). Of the antepositions, 152 (52 per cent) of the patients gave a history of constipation, and 138 (48 per cent) were without this complication. Of the 210 retropositions, 139 (66 per cent) patients complained of chronic constipation and 71 (34 per cent) gave a history of normal bowel movements. These statistics, of course, show a larger percentage of constipation in retropositions than in antepositions, but the difference is by no means great enough to warrant the conclusion that the position is a factor in producing the constipation. The fact also that in antepositions in over 50 per cent of the cases, the patients gave a history of constipation, most effectually disproves the proposition that constipation is a sympton which can be accounted for by the retrodeviation. I claim, therefore, that the conclusion can be legitimately drawn that the position of the uterus is not a factor in producing constipation It is interesting ta note that in 500 cases of pelvic disease, 291 were complicated witd constipation without regard to the position of the uterus.

As a result of this theory of pressure from the displaced uterine body, backache has from time immemorial been given as one of the classic symtoms of retrodeviations. The following statistics taken from the clinical records were gathered without any reference whatever to the question in hand. In 1,000 cases, the uterus was found in anteposition in 59 per cent, in retroposition, 41 per cent. Without reference to the position, 49 per cent of the patients complained of a chronic backache,

51 per cent answering "no" to the direct question of a chronic backache. Of the antepositions, 44 per cent of the patients gave a history of chronic backache. In the retropositions, backache was given as one of the principal symtoms in 59 per cent—41 per cent stating definitely that they did not suffer with backache. These statistics show again a larger percentage of backache in retrodisplacements, but this can easily be accounted for, by the fact that retropositions are accompanied by such complications as pyosalpinx, ovarian prolapse, and pelvic adhesions in a much larger percentage of cases than antepositions, and the small increase, 15 per cent, certainly does not warrant the conclusion that backache is a legitimate symptom of retrodeviations. With a percentage of 44 patients complaining of chronic backache in antepositions of the uterus, we may safely draw the conclusion that the cause of backache must be sought in conditions other than those affecting simply the relative position which the uterine body occupies in the pelvis.

The theory so long accepted that flexions and the pinhole os were a cause of dysmenorrhea has given rise to a most harmful superstition. The ancient gynecologist considered marriage and childbearing as practically the only remedy for the dysmenorrhea of young girls and many a one has been condemned to lifelong menstrual pain because she has not been able to follow out the only advice given her by her physician. This advice was based partly on the accepted etiology of dysmenorrhea, that it was in the majority of cases mechanical, due either to a flexion or to a stenosis of the os, both of which conditions were supposed to be corrected by pregnancy, and partly on account of the prejudice which has always existed against putting a young girl under local treatment. She has beeen made to feel that uterine or ovarian disease was somehow a disgrace and especially when it was a penalty of her unmarried state.

While it may be assumed that the majority of the profession is too enlightened today to hold these views, I hear not infrequently of physicians giving out these opinions and the laity, even the more intelligent, is still under the impression that a young girl's menstrual pains will disappear after her first pregnancy and do not realize that they are doing her a great injustice in leaving her to suffer until that time arrives.

With a view to getting some accurate statistics on the subject, the following question was added to the history sheet used in my clinic in the Mary Thompson Hospital: "Have you had more or less pain since the birth of your children?" In the 300 consecutive cases the records show more pain in 45 per cent, less in 30 per cent, 25 per cent reporting no difference. Some of the 25 per cent said they never had pain at menstruation before or since childbirth, and some reported severe pain previous to childbirth which has been unchanged. Of the 45 per cent many had never suffered from dysmenorrhea until after childbirth, but the majority had experienced some pain always at the menstrual period which had become more severe since childbirth. It is of course admitted that these statistics were gathered from a gynecologic clinic and cases taken from a general medical clinic would no doubt have given different percentages, but they prove at least that childbearing is not a panacea for dysmenorrhea and I give them to the profession for what they may be worth. I have not aimed to cover, in this article, the field of gynecologic superstitions, but simply to call attention to some of the most pronounced and the most harmful and to protest against the acceptation of dogmatic theories without proof, no matter how ancient they may be or by whom they are offered to us.

The practical application of these statistics bears directly on the enormous amount of unnecessary oper-

ating which is being done under the false impression that the symptoms of which the patient complains are due to the position of the uterus and the complications, which are in reality responsible for the symptoms, are overlooked.

A NEW METHOD

OF INCISING AND SUTURING THE LIVER TO REESTABLISH ITS CONTINUITY AND FOR THE CONTROL OF HEMORRHAGE. BY JACOB FRANK, M. D., SURGEON TO THE GERMAN AND MARION SIMS HOSPITALS, CHICAGO.

As the primary object of all modern surgical operations, especially in abdominal surgery, is to secure primary union, minimizing thereby infection and the occurrence of ventral hernias, there seems to be no reason why this principle should not as well be applicable in surgery of the liver without suppuration, provided a proper technique can be employed, so that when the cut liver surfaces are coaptated, the continuity of the organ will be reestablished, thus securing primary union and complete control of the most dreaded danger, hemorrhage.

The reason that liver surgery has failed to keep pace with the surgery of other abdominal organs can easily be ascertained on perusing the literature on the subject. The first and principal reason was the fear of hemorrhage, which, according to Kocher, is almost as true to-day as in

the time of Theden, in 1795, but not to such an extent. A second reason was the lack of knowledge of the healing and regenerative powers of the organ. A third, the danger of infection, resulting in peritonitis, and, fourthly, cholemia due to the escape of bile into the peritoneal cavity.

Injuries of the liver, accidental or surgical, even when slight, were regarded to a recent date as very grave. Thus the old idea that injuries of any sort involving the parenchyma of the liver offer a very grave prognosis, was still perpetuated to the beginning of the last decade.

Theden, (1) as early as 1795, considered hemorrhage the primary danger in liver wounds, even when superficial, this danger increasing with the injury of large bile ducts, and as the ducts and blood vessels are larger on the under surface of the viscus, wounds in this region were considered more dangerous than on the convex surface. "If not for above two dangers," he says, "wounds of the liver would not be as fatal." The methods employed in combatting hemorrhage and cholemia in Theden's times were by some means then in vogue such as rest, antiphlogistics, vesication, and venesection. Of the direct methods for controlling hemorrhage, compression by tamponade was the most primitive. Meyer (2) has also shown that all surgeons up to the beginning of the 19th. century regarded injuries of the liver as hopeless. Larrey, (3) in 1812, wrote that laceration of the liver will always prove fatal if the wound communicates with the abdominal cavity; also that the escape of bile into the peritoneal cavity was fatal. In 1864, Pirogoff (4) asserted that wounds of the liver were more frequent than the stomach and spleen, and in his experience were always complicated and fatal.

A review, however, of recent literature, at least of the past fifteen years, reveals the fact that modern surgery

has done much to lessen the gravity of the prognosis in liver wounds either accidental or those left by the surgeon after the removal of various growths.

The most complete statistics are those of Elder, (5) in 1887. Of 543 cases collected by this author, he shows a mortality of 66.8 per cent. In rupture, 85.7 per cent; in gunshot wounds, 55 per cent; in incised wounds, 64.6 per cent. These statistics are of more favorable cases, and do not include injuries inflicted by the surgeon in removing various growths. The prognosis has materially changed within the last twenty years.

Von Hacker, (6) in 1886; Segon, (7) in 1887; Langenbuch, (8) in 1888, followed later by Loretta, (9) Pozzi, (10) Ruggi, (11) and others, during a period when liver surgery was in its infancy, and when the experiments of Hahn, Glück, Ponfick and Meister were not carried out, reported good results by direct primitive methods then in use.

Luis, (12) in 1886, using a combination of different methods was the first to remove a solid tumor, which proved to be a benign adenoma.

The patient died from hemorrhage. In 1870, during the Franco-Prussian war, von Bruns (13) was the first to resect liver tissue after an injury, with good results.

Since the experiments of Holm, (14) in 1867, followed by Joseph, (15) Koster, (16) Hüttenbrenner, (17) and others, showing experimentally the healing power of liver wounds, liver surgery assumed a bolder aspect; more cases were reported, and the statistics, though yet imperfect, began to appear in the literature, recording good results by various methods, as far as the recovery from the operations, was concerned.

It remained, however, with Ponfick, (18) Meister, (19) and others to stimulate the surgeon and make him less timid in attempting more frequently to attack this organ; demons-

trating upon lower animals the regenerative capacity of that organ by removing as much as three-quarters of the liver, and showing a return to its normal size by compensatory hypertrophy and hyperplasia.

The fear of cholemia due to the escape of bile, causing peritoneal involvement, as claimed by the older school of surgeons, had been refuted by Lücke (20) and Tillman, (21) the latter citing a case of von Landerer, with injuries of the gall tract, and the withdrawal through five punctures of 27 liters of bile, and no peritoneal complications resulting from its presence, as the bile is aseptic and at the same time antiseptic. I concur in these observations from my own clinical experience.

Until about twenty years ago, the liver was not deemed amenable to surgical attack, on account of its vascularity and the fear of hemorrhage.

There were many methods in vogue up to the beginning of the last decade, all having as their basis the tamponade alone or combined with the suture, the suture alone being only a recent development.

Elliott (22) classifies the different methods as follows:

1. Packing the wound and fixing the stump extraperitoneally.

2. Packing and dropping the stump into the abdominal cavity.

3. Application of the thermo-cautery to stump and packing.

4. Combination of suture and packing.

5. The suture alone.

This is a broad classification of methods; there are other means, however, that help along the above procedures, or are used in connection with other methods of hand-

ling the stump, as ligation of individual blood vessels, as advocated by Clementi (23) and others, ligation of vessels *en masse*, demonstrated experimentally by Kuznetzou and Pensky (24) and confirmed by Auvray (25); application of the tourniquet or constrictor, suggested by Terrillon, (26) followed by Israel, (27) Keen, (28) Carl Beck, (29) and others, using the same either for temporary arrest of bleeding, or for the purpose of temporarily constricting the growth to be removed until strangulation of the pedicle takes place. Hahn, (30) and Langenbuch, (31) ligated the superior and inferior mesenteric arteries; Loretta, (32) Koenig, (33) and others arrested bleeding by a running suture of Glisson's capsule. Tillman, (34) and Lücke (35) advocated the Paquelin cautery, which is still used by many operators. Suegiroff and Koslenko (36) utilized steam; Hollander and Abramowitz (37) used hot air. All of these devices are employed by the different operators, each selecting the one best suited for the particular case. Other procedures in conjunction with the ones just cited are utilized in handling the stump, the principal one being the tamponade. It will therefore be seen that the principal object in devising these various methods was for the control of hemorrhage. The reestablishment of the continuity of liver surface was not considered, and hence the development of more proper methods of suturing liver tissue after the resection of large portions of that organ remained thus far imperfect.

Elliott, (32) *in the face of modern advancement in surgery, asserts that packing in liver wounds seems to him to have settled the surgical treatment of that viscus for some time, if not for all time.* Of course, his assertion was made at a time when modern surgeons only awakened to the realization that wounds of the liver, as well as wounds of other abdominal organs, are amenable to the same surgical laws as wounds in other portions of the body, provided a method of procedure could be devised that will reestablish

the continuity of the liver whenever the necessity arises for removing large portions of that organ, at the same time completely controlling the bleeding, as is done in other regions.

I am fully aware of the good results recorded in the literature, when the tamponade alone or combined with suturing was employed by Hochenegg, (38) von Bergman, (39) von Eiselberg, (40) and Albert (41); but I am also aware of the fact that surgery of the liver needs advancement, and such advancement is surely coming, judging from the work that has been conducted by Ceccherilli, (42) Kuznetzow and Pensky, Auvray, Postemski, (43) Segale, (44) Chapot-Provanst, (45) Carl Schlatter, (46) Carl Beck (47), and others, who are strong advocates of the suture.

It is only a very few years when the Mikulicz drain was employed in a large class of abdominal cases to control the oozing from raw surfaces denuded of its peritoneal coat; but since we have learned to cover these denuded surfaces with fresh peritoneum, even where the area is more or less large, the drain is dispensed with in a very large class of cases, and the closure of the abdomen thus made possible. It will, therefore, be seen that what is not possible and seemingly difficult to-day becomes a possibility and very easy to-morrow, provided a proper technique can be utilized.

The possibility of arresting hemorrhage with the suture in the surgical treatment of either accidental wounds or those left by the surgeon after resection of large portions of liver tissue was demonstrated experimentally and clinically by Ceccherilli, Kuznetzow and Pensky, Auvray, Carl Schlatter, Segale, Beck, Chapot, Provanst, and others. Ceccherilli and Segale both employed foreign bodies, one perforated plates of whale-bone, and the other ebony rings strung on catgut, both using the devices for the support of the suture which, according to these authors, complet-

ely arrests the hemorrhage thus making the primary closure of the abdomen possible without any drainage. These foreign bodies used as devices are left in the abdominal cavity, trusting to their becoming encapsulated. Carl Beck, of Chicago, utilized bands of tissue from the abdominal wall, including peritoneum, fascia, and sometimes muscle. The suture is carried through these bands and is utilized for its support. Kuznetzow and Pensky, and also Auvray, suture the liver in different ways around the part to be removed; then, resecting the portion of liver surrounded by the suture, this leaves a raw surface after resection is completed. These last-named authors demonstrated by ingenious experiments the possibility of successfully ligaturing liver tissue, as the walls of the blood vessels are sufficiently strong to sustain a weight from 290 to 1600 grams without rupturing same, an that the isolated hepatic veins on the whole are stronger than the arteries.

The clinical results obtained by Carl Schlatter in his reported cases will demonstrate the effectiveness of the suture in liver wounds, and the future in store for the surgery of that organ.

The last-named author reports five very interesting cases:

1. Stab wound; prolapse of colon and omentum; profuse hemorrhage from liver; wound about one inch wide, and so deep that the finger-tip failed to reach the bottom; two deep sutures of heavy catgut, and two capsular sutures of fine silk; recovery.

2. Gunshot wound (revolver); severe hemorrhage; three deep sutures of heavy catgut checked the bleeding; good recovery made.

3. Gunshot wound of liver by Falhert projectile; the track of the bullet involved the stomach, jejunum, pan-

creas, and the left kidney; patient 17 years old, and liver tissue was friable; six deep silk sutures stopped hemorrhage; death after eight hours.

4. Rupture of liver and right kidney two days before operation. Extreme anemia; laparotomy; suture of liver; hemorrhage stopped; saline infusion; death.

5. Almost complete sagittal rupture of left lobe of liver and profuse exudate of bile into peritoneal cavity; laparotomy, suture of liver fourteen days after injury; death.

In only one of these cases (3) was there a tendency for the sutures to cut through the tissues. In this case silk, instead of catgut, were used, and the tissues were more friable than in the other adult patients.

It will be observed that the results, as far as checking hemorrhage from the liver by means of the suture is concerned, seem very satisfactory, and that catgut would be preferable to silk. The results obtained by Schlatter in suturing large liver wounds are very encouraging. In view of the fact attending the results of the first two cases, Burckhardt's objections to the employment of the suture in large liver wounds do not appear valid. That it is possible to completely close the abdominal cavity after suturing liver wounds must be conceded in view of the clinical facts recorded by Schlatter and others.

Having reviewed the progress made in liver surgery by the different experimenters and clinicians, and knowing the possibility of suturing liver, and even the possibility of ligating vessels individually or *en masse*, and knowing also. Schlatter's asssertion that after removal of large tumors the combination of suture and tamponade may be necessary where the former alone failed, I concluded to conduct a series of experiments with the sole object in view to find a method of procedure whereby large liver

wounds, either accidental or those left by the surgeon after removing growths of various sizes, could be successfully managed with the suture alone, reestablishing the continuity of the organ, insuring complete control of hemorrhage, making the primary closure of the abdomen possible without any drainage.

Within the past three years a series of eighteen experiments in all were conducted on dogs. Out of these, two experiments consisted in simply incising the liver through its entire thickness, dropping the organ back without suturing same, or any other attempt to control hemorrhage. Both dogs recovered. The other sixteen experiments were conducted with certain objects in view. One object was to devise a method that will facilitate easy and quick suturing with a minimum amount of tension on the liver parenchyma, thereby completely controlling the bleeding. The other object, that the procedure be so planned that when the operation is completed the continuity of the liver will be reestablished, leaving no raw surfaces or ragged edges. In order to accomplish the two objects, the following plan was pursued, as will be described below, and shown on the drawings made by an artist from operations on the cadaver.

Supposing a portion of liver is to be resected for either a severe, extensive, crushed laceration or a growth, and these, as a rule, occur more often at or near the border of the liver, if it is to be removed in a transverse direction, I commence to incise the liver tissue on the upper surface, beginning at the healthy border on the hypochondriac side of the growth, carrying the knife around the part to be removed to the border of the viscus on the epigastric side of the part to be resected. (Fig. IV.) The incision in the under surface is carried out in such a manner that both will meet. (Fig IV.) If desired, the incision may be commenced on the under surface

and completed on the upper surface. The portion of liver thus removed by the junction of the two incisions is wedge-shaped, leaving the organ with two flaps forming a trough. (Fig. V.) If the flaps do not fall into coaptation, more tissue may be cut away, as the correct apposition of the flaps is essential for easy suturing. Before, however, suturing the flaps, they are held apart and any arterial bleeding controlled either by single ligation or ligation *en masse*, as the case demands. The arterial bleeding is easily distinguishable from the venous oozing, when no temporary constriction is employed, by its different color, being of a bright red, emerging through the venous blood. The ligation *en masse* is carried out by passing a medium-sized catgut suture through the entire thickness of the liver, surrounding the vessel or vessels; a single turn in the catgut is now made, and gradually tightened until the bleeding ceases; the ligation is now completed by taking one or two more knots. (Fig. A.) It will sometimes happen that by drawing on the catgut the bleeding is not controlled until the catgut that is drawn upon cuts its way into the liver tissue; this may cause slight oozing where the catgut has buried itself. Should this occur, slight pressure continued for a minute or two, or a superficial catgut suture will stay the bleeding. As soon as the arterial hemorrhage is checked, the flaps are quickly held in contact, and a running suture, with heavy catgut threaded in an extra long non-cutting needle, is commenced at one end and quickly continued in the following manner: One suture is carried deeply through the bottom of the trough, and then one superficially, and so on alternating until complete closure. The sutures are gradually drawn without force, thus bringing the two flaps in coaptation (Figs. 6 and 7). The mode of suturig can be varied according to the fancy of each operator; the main object is to bring the two flaps together, oblit-

erating all dead space. The continuity of the liver surface is thereby reestablished, appearing as if a new border was constructed for the organ. No raw surface or ragged edge is to be left.

Supposing for the same purpose a portion of liver is to be removed in a longitudinal direction to the viscus, the following method is pursued: A V–shaped portion of the entire thickness of the liver is cut out (Fig. 9 and 10). The same method is employed on the two broad raw surfaces left by the removal of the V–shaped piece, as in the first transverse operation.

(Figs 11 and 12). When the operation is completed, the raw surfaces of the original V left, after the removal of the tumor, are transformed into smooth continuous liver tissue, assuming the form of liver borders, and the V–space left by the removal of the tumor persisting as a notch (Fig. 13 and 14). It may be necessary, and in a great many cases I think it would be advisable, to use some means for temporary control of bleeding while the operation is being carried out. The tourniquet is employed for this purpose by some operators. This would probably be sufficient were it not for the difficulty of retaining same in position by some method which is not desirable. I have at present in construction a clamp, which, when perfected, will, I think, serve admirably for this purpose, and thus still further facilitate the work on the liver.

With this method, giving the modes of incising the liver, thereby facilitating easy suturing, as the falling together of the flaps positively does away with any tension on the liver tissue by the sutures, hemorrhage is successfully arrested, as was amply demonstrated in the sixteen experiments. In all, the control of hemorrhage was prompt, without any attempt of its temporary control. There was not enough blood lost to produce shock or anemia in any of the dogs. Only three dogs

died of sepsis. In none of the animals were there any evidences of either primary or secondary hemorrhage or escape of bile.

The writer thinks and believes that such results, with a simple method, will transform the surgery of the liver, and if put into practice on the human, operations on that organ will take rank with other modern operations.

My object is not to convey the idea that the method above described is ideal. Cases may present themselves where this procedure cannot be carried out, on account of the inaccessible locality of the operative field; but in most of the cases I convinced myself, from the limited number of experiments, that the method can be employed with little difficulty. However, if by the work that was carried out nothing more was accomplished than advancing one more step in the evolution of liver surgery, thereby stimulating further endeavour, I will consider myself amply repaid for my labor in this field of research.

The question now to be considered is, what portion of the abdominal wall offers the best site for the operative incision? According to Schlatter, the upper portion of the liver, hemmed in as it is by the costal framework and by the diaphragm, is in a difficult position for surgical access. The left lobe and the irregular concave under surface are, on the contrary, most accessible. By moderate traction, the anterior portion of the convexity can usually be brought within reach, especially if the cushion or sand-bag, as suggested by Mayo Robson, is utilized (Fig. I), and in a similar manner the almost inaccessible posterior part. Division of any of the ligaments of the liver, with the possible exception of the suspensory ligament, which is of little or no hindrance to an operation, is scarcely to be contemplated. If

BIBLIOGRAPHY.

1. Theden: Mayer on Die Wunden der Leber und Gallenblase. 1872, p. 114.
2. Meyer: Ibid.
3. Larrey: Memor. de Militarchir, 1812.
4. Pirogoff: Kriegschir., p. 576, 1864.
5. Elder: Arch. f. Klin, Chir., Berlin, 1886--7, Vol .34, p. 369.
6. Von Hacker: Wien. Med. Woch., Vol. 14, 15,1886.
7. Segon: Bull. de la Soc. de Chir. de Paris, 1887, XIII.
8. Langenbuch: Centralbl. f. Chir., 1891, p. 82.
9. Loretta: Congress de Ital. Chir., Neapol., 1888.
10. Pozzi: Gazz, Medic. de Paris, June 30, 1888.
11. Ruggi: Dell Epatectomia, etc., Bologna, 1889.
12. Luis: Gazz. delle Chir., 1886.
13. Von Bruns: Beitrage f. Klin. Chir., Bd. IV, Heft 1.
14. Holm: Sitzungshericht, Bd. 55.
15: Joseph: Arch. f; Microscop. Anat., 1869, Bd. 5.
16. Koster: Centralbl. f. Med. Wissensch., 1868, No. 2.
17. Huttenbrenner: Arch. f. Microscop. Anat., Bd. 5.
18. Ponfick: Verhand. der Deutsch. Gessel. f. Chir., 19 Congres., 1890.
19. Virchow's Arch. f. Path. Anat., Bd. 63, 189--200.
20. Verhand. der Deutsch. Gessel. f. Chir., 1890.

21. Ibid.

22. Ann. Surgery; 1897, XXV, p. 88.

23. Clementi: VIII Dol. Congres. della Soc. Ital. di Chir., a Roma, 1891.

24. Rev. de Chir., 1896, pp. 501 and 594.

25. Auvray: Rev. de Chir., 1898, Nos. 5, 8 and 9.

26. v. Volkman's Deutsche Chir., 1861, No. 1-

27. Israel.

28. Boston Med. and Surg. J., 1892, Vol. 126, p. 105.

29. Carl Beck: J. Am. Med. Ass., 1902, p. 1063.

30. Hahn:

31. Centralbl. f. Chir., 1891, p. 82.

32. Loretta: Congres de Ital. Chir., Neapol., 1888.

33. Koenig:

34. Verhand. der Deutsch. Gessel. f. Chir., 1890.

35. Ibid.

36. Centralbl. f. Chir., Leipzig, 1902, Vol. 29, pp. 489–92.

37. Hollander and Abramowitz.

38. Wien. Klin. Woch., 1890, 12.

39. Centralbl. f. Chir., 1890, No. 30.

40. Wien. Klin. Woch., 1892, No. 2.

41. Albert.

42. Ceccherilli: Gazz. d. Osp. e. d. Chir., 1895, Vol. 16, p. 1604.

43. Postemski: Centralbl. f- Chir., 1893, p. 359.

44. Segale.

45. Chapot-Provanst: Arch. Prov. de Chir., Paris, 1901, Vol. X, p. 198.

46. Beite. f. Klin. Chir., Bd. XV, Heft 2, 1896.

47. J. Am. Med. Ass., 1902, p. 1063.

THE EXTRACTION OF CATARACT.

CHOICE OF OPERATION BASED UPON INTRAOCULAR CONDITIONS. BY S. D. RISLEY M. D. PHILADELPHIA, PA.

There is probably no operation in surgery which is freighted with more perils and unforseen contingencies than that for the extraction of cataract. There is no other which depends for a successful issue so much upon accuracy of detail and a faultless technique. This is true even when the patient is docile, the instruments are good and the cataract free from complications.

The purpose in the present paper is not, however, to set forth the details and technique of the extraction of what may be called uncomplicated hard cataract, but to study *certain complicating conditions, their relation to the opaque lens, and the extent to which the complications modify prognosis and render the removal of cataract difficult and dangerous.*

To be strictly logical it is probable that no cataractous eye should be regarded as free from disease.

The term *Senile Cataract* which still occurs in our catalogues as a qualifying adjective has been misleading since it removes hard cataract, in the mind of the student from the domain of pathology, and places it, like gray hair, etc. among the signs and concomitants of advanced life; whereas opacity of the crystaline lens occurs at any age. It is soft when present in early life, partly for the reason that in infancy and youth the normal lens is relatively soft; it is hard in old age because even the transparent lens in advanced life is relatively hard. It should be borne in mind, however, that, as soft cataract occurs in a very small percentage of persons in early life, so is opacity of the lens in even very aged people a comparatively rare occurrence. When it is present there is no apparent relation between the cataract and the signs of general senility; indeed it probably occurs quite as frequently in the eyes of hale and hearty old men and women as in those who manifest marked senility. So far then from accepting opacity of the lens as one of the inevitable attendants, and unavoidable inconveniences of the decline of life we should seek for the causes which underly and produce an exceptional condition.

In any careful study of the history, and the objective and subjective symptoms of our patients with cataract, whether soft or hard, it will be discovered in a large percentage of cases that there is present, during the stage of incipiency or immaturity more or less pronounced asthenopia. That is to say weak eyes, headache, swollen and red caruncles, injected palpebral conjunctiva with a tendency to thickening of the retro-tarsal folds and partial retention of tears. As the opacity advances towards maturity so that the light is excluded and attempts to read are gradually relinquished these symptoms usually subside and are often forgotten by the patient. That they ever existed will, not infrequently be denied except on careful inquiry when the reply will often be made

"Oh yes, I had headache (or weak eyes) all my life until recent years."

During the stage of incipiency, when it is still possible to study the fundus in one or both eyes with sufficient clearness to make out details, not only will the presence of anomalies of refraction be demostrated in a large percentage of patients but also the pathological changes due to prolonged eye strain. A general fluffiness of the eye ground, macular disease, chorioidal atrophies, atrophic crescents usually at the temporal margin of the optic nerve, web like or granular opacities floating in a fluid or semi-fluid vitreous are the rule rather than the exception.

Indeed the group of cataract patients in which there seems to be an obvious relation between the chorioidal disease, eye strain and the opacity of the lens is a large one and probably constitutes the majority of those who come to us for extraction. But there is another considerable group who suffer, not only from the outward results of eye strain consequent upon uncorrected errors of refraction or ocular imbalance, but who are victims of some general dysrcasia, e. g. the gouty or rheumatic diathesis, which is more or less rapidily, but steadily sapping the general health through advancing disease of the general vascular tree. I am quite aware in making this statement that many authorities are lothe to admit any definite relation between these general conditions and the occurrence of cataract.

The blood vessels of the retina and of the highly vascular chorioid are very prone to participation in the disease of the general vascular system and not infrequently, through the aid of the ophthalmoscope, furnish the first evidence of the essential cause of the general impairment of health; the gray borders to the retinal arteries being the only visible or demonstrable manifestation of the perivascular

disease present throughout the body. The liability to disease of the uveal tract in rheumatism and gout finds ample proof in the great frequency of iritis, iridocyclitis and chorioiditis associated with these affections.

When we consider the fact that the nutrition of the eyeball is dependent mainly upon the normal circulation of its uveal tract, through the long and short posterior and anterior ciliary arteries, it becomes obvious that any disease of its blood vessels and disturbance of the circulation through this important membrane is of serious import to the health of the organ. This is true whether the disturbance is primarily due to blood vessel disease, or to some long standing irritation or disease of the chorioid, ciliary region or iris, consequent, either upon the presence of some general dyscrasia, as for example gout, rheumatism or diabetes, or the pathological changes in the fundus oculi due to eye strain produced by uncorrected errors of refraction or binocular balance.

Reasoning *a priori* we would expect to find the avascular structures of the eye, as the vitreous body and the lens, the most prone to suffer from the impairment of the nutrition of the globe brought about in the manner indicated, since they are nourished at second hand and any impairment of the sluggish lymph streams by which even in health they are nourished must soon manifest itself in impaired nutrition. Clinical study demonstrates the correctness of such reasoning and suggests a logical cause other than senility for the occurrence of opacity of the lens and degeneration of the vitreous body. In making this statement I am not unmindful of the fact that a diseased vascular tree is often a sign and concomitant of old age.

Experience has shown that in the presence of chronic disease of the uveal tract the vitreous body looses its transparency, becomes semifluid and is filled with a round

cell exudate, which, with a magnifying glass is manifested by a granular debris which moves to and fro with more or less freedom with every movement of the eye. The posterior capsule of the lens, either at its periphery or at the posterior pole sooner or later becomes gray and the contiguous cortical fibres of the lens soon participate in the impaired nutritious conditions and become opaque giving rise to posterior capsular or polar cataract. Later the entire lens may, and usually does, become involved producing the so called mature or ripe cataract.

When seen by the surgeon for the first time at this stage the antecedent conditions I believe are too frequently everlooked especially if the patient has passed the meridian of life. In young patients we have always been prone to regard the occurrence of cataract as a sequal of ocular disease, but the contention of this paper is that in the hard cataracts of middle and advance life we should also regard them as the result of antecedent pathological states of the fundus oculi. Such a view would not only modify our prognosis in many cases, but change our procedure in many important respects. For example, if asthenopic symptoms are still present, we would not hasten our operative procedure, not because of immaturity of the cataract but for the reason that the chorioid behind the opaque lens is still in a pathological state, the judicious treatment of which for a few weeks or months would material improve the prognosis as to a favorable result from extraction. It is probable that in this view of the nature and cause of the opaque lens we find a sufficient explanation for the proverbially bad results following attempts at extraction of immature hard cataracts after fifty-five or sixty years of age; or, on the other hand, for the more favorable prognosis entertained in cases of fully "ripe" lenses.

After the opacity is sufficiently advanced to preclude

the use of the eyes and so to bring about an enforced rest and also to shield the inflamed retina and chorioid from the influence of light, the pathological state of the fundus slowly subsides, especially in cases when they have been set up and maintained by eye strain. It is probable that this beneficial influence of rest is felt in less measure also even when a constitutional dyscrasia is a primary factor in the production of the intraocular disease.

The enforced rest of the eyes in such cases has in a word led to an improved state of the fundus which materially improves the chances of an uneventful convalescence after operation.

If the condition of one eye permits the ophthalmoscopic study of the fundus and reveals a fluid vitreous and chorioidal atrophies or a fluffy unhealthy chorioid; or if the presence of a gray posterior capsule is demonstrable it is reasonable to conclude that the condition of the other eye, in which the opacity of the lens is more advanced, is probably worse since the lenticular disease had progressed more rapidly; a fact which suggests the wisdom of therapeutic measures addressed to the relief of the existing chorioidal disease before attempting the extraction of the opaque lens.

It is probable that most surgeons of experience would not attempt the operation for simple extraction with the knowledge that he had a posterior capsular cataract to deal with, and all that this implies—e. g. chorioiditis and a fluid vitreous. He would certainly give a less favorable prognosis, whatever operative procedure he chose to adopt, for, it is a matter of common observation that in this class of cases the cortex of the lens adheres closely to the capsule and renders the delivery of the lens more difficult. The efforts to dislodge it from its capsule are very liable to cause a rupture of

the suspensory ligament and a more or less copious escape of a viscid, or fluid vitreous.

Having said so much by way of defining the nature of the complications which so frequently mar our results in the extraction of cataract, I come to speak of the methods of treatment and operation which in my own experience have given the best results and to outline certain indications which have controlled me in the choice of operation. In the first place I never attempt extraction by simple method in a dull gray or amber colored, homogenious lens that has ripened slowly; or on one that is translucent.

In cataracts presenting these appearances it will usually be found that the iris lacks the lustrous appearance of health and that the pupil does not dilate widely under the influence of a mydriatic; a fact which suggests its participation in the general uveal disease. Such irides are prone to inflammatory reaction from slight traumatism, and it is not possible to deliver, through the narrow pupil of a rigid, inelastic iris, a large, hard lens without much bruising and stretching. This will in all probability, especially in aged people with gouty or rheumatic tendency, lead to attacks of mild traumatic iritis, which glues the iris to the remaining lens capsule, and sets up proliferation in the capsule itself which becomes gray and tough. At best it must protract the convalescence and vitiate the ultimate result of operation. In such cases secondary capsulatomies are almost invariably required and after these attacks of iritis with the attending proliferation the capsule is both tough and inelastic so that it does not retract after a simple section through it. It is in this class of cases that traction upon the membrane in any effort to cut or tear it leads to attacks of irido-cyclitis which not infrequently cause the loss of the eye either through the

gradual contraction of the organized exudates in the vitreous, or by detachments of the retina or ciliary processes by traction at the time of operation.

In the class of cases under discussion therefore I think that extraction without iridotomy is rarely advisable.

In my own experience the safest procedure has been first more or less prolonged treatment by the administration of the iodides and bromides internally, and by homatropine or atropine locally until the headaches and ocular irritation have subsided before any operative interference is undertaken. A preliminary iridotomy is then performed and from four to six weeks later the extraction. If in the first operation the patient has proved tractible the extraction is done under cocaine anaesthesia; if not, a general anesthetic is administered. Two methods of procedure present themselves for consideration. Shall the lens be extracted in its capsule, or by the more usual procedure with anterior capsulotomy?

My own results have been, I think, about equally good in each. If the first is chosen a Kalt stitch is introduced and a large corneal section made. A wire loop is then introduced through the supensory ligament above, and made to embrace the posterior convexity of the lens like a vectis and the delivery made by gentle traction. The loop of the Kalt stitch is then drawn home and tied bringing the edges of the wound into firm apposition. When successful this procedure removes the gray posterior capsule with the adherent cortex and leaves a clear black coloboma. The dangers which arise from adhesions between capsule and iris and the contingencies of the subsequent capsulotomy are avoided. On the other hand I cannot free myself from a certain dread of danger, which I think most surgeons qui-

te justifiably entertain, from the introduction of instruments into the vitreous chamber of the eye. Nevertheless I am free to say that in this particular operation my dread of injury has not been realized. Another feature of the procedure just described must be considered, viz: the added possible danger from corneal infection at the site of the corneal suture, especially in cases when the conjunctiva is not healthy, or, in the presence of affections of the lachrymal sac. Even here, however it is open to question whether this danger does not find adequate compensation in the more rapid healing of the corneal section secured by the suture.

In the second procedure, that by anterior capsulotomy, the corneal section may be smaller, but it should be remembered that the lens in these complicated cases is usually large and often very dense or hard.

Too large a section is always safer than one that is too small to permit the free delivery of the lens. If after delivery masses of gray cortex remain, either free, or adhering to the capsule their removal by irrigation, by a sufficiently free employment of a warm salt solution is preferable to the introduction of a spoon or to any considerable or rough manipulation for its extrusion, for the suspensory ligament in the group of cases under consideration seems especially brittle and readily ruptured.

In the secondary capsulotomies, almost without exception, required in these cases, I prefer two instruments each introduced near the limbus at opposite sides of the cornes, I prefer a spear knife which I have devised, with double edge and a very thin midrib, beaten from a shaft containing the same amount of material as the blade which therefore fills the corneal wound made by the puncture and prevents the escape of the aqueous humor.

The points of the two spear knives should both perforate the membrane at the point desired and being made to separate simultaneously in opposite directions will cut the capsule without traction upon the ciliary region. If the membrane does not retract from the first section made as described, the instruments can be carried to the original position, turned on their long axes and a second section made at right angles to the first. Carrying their points deeply into the vitreous should be avoided.

If no reaction follows, the convalescence is uneventful and the after treatment very simple. The pupil should be dilated by the daily instillation of atropine and the eye protected by a light, firm bandage, over a nicely adapted pad of absorbing cotton. Both eyes should be closed and the patient confined to his bed in a moderately lighted room until the wound is healed and the anterior chamber restored. He is then allowed to rise and sit in an arm chair at the bed side and the bandage removed from the unoperated eye.

I esteem it of importance to make the confinement to bed as brief as prudence will permit. The prolonged quiet in bed rapidly saps the general vigor of aged patients as is soon manifested by their flushed cheeks the loss of appetite and the desire to remain in bed. Then too I am convinced that it fosters the tendency to mild attacks of rheumatic iritis which usually come on from the fifth to the eighth day after the operation.

If inflammatory reaction follows, without evidence of infection the great liability to local manifestations of the rheumatic or gouty diathesis should be born in mind as indicating the general therapeutic measures to be adopted. The value of salicylic acid in these cases I have many times seen demostrated.

SANITARY CONDITIONS IN CUBA

SINCE THE PROCLAMATION OF THE REPUBLIC. BY CARLOS J. FINLAY CHIEF SANITARY OFFICER FOR CUBA.

"Sanitation" being largely a comprehensive term, I propose to consider it from the viewpoint of a sanitary officer in Tropical America; I shall therefore divide my subject into three separate parts, namely, 1. Special Sanitation against Yellow Fever. 2. Special Sanitation against other infectious diseases, and 3. General Sanitation for the preservation of public health.

1. SPECIAL SANITATION AGAINST YELLOW FEVER.

Havana, in particular, and the Island of Cuba, in General, having acquired during the last century an unenviable reputation as a prominent centre of yellow fever infection, its sanitary conditions with regard to that terrible scourge, since the proclamation of its Independence, deserve to be considered, first and foremost, among its sanitary factors.

It was the privilege of this Congress at its third meeting, held in Havana in February 1901, to listen to the first public proclamation of a scientific doctrine which, although not new in its conception, was being for the first time, experimentally demonstrated in a manner which could leave no reasonable doubt as to its correctness and solidity. From the majority of the members present on that memorable occasion, an immediate and absolute acceptance of a doctrine decidedly subversive of all prevailing creeds regarding the etiology of the most dreaded of American diseases, was not to be expected even in the face of such conclusive evidence.

Doubts were at first suggested as to the conclusiveness of the experiments; but so scientifically and carefully had all sources of error been excluded, that the doubters had to fall back upon the familiar resource of questioning the competence or impartiality of well trained and unimpeachable experts upon whom had devolved the duty of confirming the diagnosis of yellow fever in the experimental cases that were submitted to them by the U. S. Yellow Fever Commission in Habana (1900 & 1901). The Congress heard, at that meeting, a brilliant account of all the experiments which had been carried out by the Commission and its conclusions, from the lips of its distinguished Chairman, Major Walter Reed U. S. Army, whose untimely death, the following year, we all mourn as a great loss to Science, specially in a field of investigation for which he was so remarkably gifted.

Subsequent experiments, on the same lines, gradually gained new adherents to the doctrine. Its confirmation by Dr. John Guiteras, in Havana, the ensuing summer, additional experiments by the first Commission later in the same year, those of Working Party nº 1 of the Marine Hospital Service, in Veracruz, in 1902, others by a Brazilian Commission, at Sao Paulo and, finally, those

of the French Commission from the Institut Pasteur, in 1903 at Rio de Janeiro, brought over every truly scientific mind to accept the conclusion that the mosquito now classified as "Stegomyia fasciata"is indeed a ready transmitter of the yellow fever infection. Yet many still demurred at acknowledging the intervention of that insect as the only agency through which the disease could be propagated, to the exclusion of every other.

This point was the last entrenchment behind which the doubters had sought refuge. It had figured nevertheless as one of the fundamental tenets of the doctrine, as conceived by its founder, and the one which had led him to identify the particular kind of mosquito by which the disease is transmitted and map out the methods by which the propagation of yellow fever might be surely prevented, namely, by keeping yellow fever patients from being bitten by that species of mosquito or by protecting all non-inmunes against the bites of any stegomyia that might previously have bitten a yellow fever patient.

It has required no less than 36 months of uninterrupted immunity from that disease, in a locality that had never known a single summer of such immunity during the preceding hundred years,—36 months without the occurrence of a single case of yellow fever originated on the Island of Cuba, and the conviction that this immunity could only be attributed to a strict observance of the two aforesaid rules, to dispel the last doubts as to the fact that no other precaution is needed, and that provided those precautions be faithfully observed, yellow fever patients can be voluntarily admitted and treated in a former habitat of the scourge without any fear of its propagation.

To Colonel W. C. Gorgas, U. S. Army, who was Chief Sanitary Officer for this Island till May 20th. 1902, belong the glory of having first driven the infection of yellow fever out of Havana, in the course of seven months,

ending in September 1901, through his assiduous observance of the same rules. This meant, *ipso facto*, to drive the disease out of the Island since no other locality, except Havana, held at that time a sufficient proportion of non- immune inhabitants to foster the development of self-supporting centres of epidemic yellow fever, so long as the well regulated vigilance of the Marine Hospital Service could be relied upon to bar off the subreptitious introduction of yellow fever patients or of infected stegomyias into Cuban ports.

After eight months of immunity, in May 1902, when the Republic was proclaimed in Cuba, many physicians still doubted, attributing the immunity to the Winter and Spring seasons and prophesying a return of the usual epidemic as soon as the summer season should have fairly set in. But they were doomed to disappointment.

Up to the present date (December 1904), notwithstanding the importation of 22 confirmed cases from foreign ports, not a single autochthonous case of yellow fever has occurred in the district of Havana, nor, until two months ago, in any other part of the Cuban territory. The reason for this distinction will now be explained.

The first break in the period of immunity which had persisted all over the Island during the previous 36 months, was notified to the Superior Board of Health in Havana, from Santiago de Cuba, on the 20th. of October of the present year.

An American who had arrived at Santiago on the 27th. of September, was employed by the Cobre Mines Company as foreman at their foundry at Punta de Sal, close to the shore near the entrance of the Santiago Bay, about six miles distant from the City on the opposite shore. He was taken ill on the 17th or 18th., but was first seen by a physician on the 20th. of October and immediately reported as suspectof yellow fever. The local Commission

of medical Experts at Santiago confirmed the diagnosis of yellow fever.

The source of the infection, in this case, could not be traced to any previous one in the city, at Punta de Sal nor among the personnel at the Cobre Mines. It is presumed therefore that it may have been caused by some infected mosquito from one or other of the vessels held in quarantine in the Santiago Bay. During the severe gales that had prevailed, it is possible that some such insect having been blown away from the deck by a gust of wind, may have alighted upon a floating body, and, drifting with the ebb tide towards Punta de Sal, may have landed there and bitten the patient a few days before his attack. (1).

As soon as the first notification was received in Havana, Dr. John Guiteras was commissioned to investigate the case at Santiago. He started immediately, taking with him some trained men from our disinfection plant at Havana. He confirmed the diagnosis of yellow fever and ordered a thorough disinfection for mosquitoes not only for the house occupied by the patient, but also for the neighbouring ones. A careful inspection was made, the houses were fumigated and breeding places for mosquitoes were as far as possible destroyed. All the places in the City visited by the sick man, previous to his illness, were similarly dealt with. The patient had already been removed to the Lazaretto of Cayo Duan when Dr. Guiteras arrived. A census of all non-inmmunes at Punta de Sal was made, and all were quarantined within a limited circuit guarded by policemen. The daily medical inspection of the non-immunes was maintained during 15 days.

(1) In confirmation of this mode of conveyance see my Note-Book series- Vol. II p. 143—and my explanation of the curious case of the "*tailleur de pierre*" at St. Nazaire in Revista Med. Tropical; Julio 1903, p. 143.

On the 31st. of October, 10 days after the patient had been removed to Cayo Duan, and 13 or 14 after his invasion, another non-immune American was taken ill and reported as suspect of yellow fever, all the more so, for having slept in the same room with the first patient and taken care of him during the first days of the attack. This second patient was immediately removed under a mosquito protector to Cayo Duan, and all the previous measures of disinfection against mosquitoes were repeated, while the non-immunes were kept under medical surveillance. The case proved to be a mild one; the diagnosis was however confirmed and ratified by Dr. Agramonte who was sent from Havana on a mission similar to that of Dr. Guiteras. Every precaution was taken to avoid a further propagation. Since that date, October 31st., no other case of yellow fever has been recorded.

Another patient, however, although he was ultimately pronounced "not yellow fever", should not be entirely ignored. This one was a Cuban 21 years old, born in Santiago, but who had lived in France and Algiers since the age of four years. He returned to Santiago with his family on the 3rd. of November, on a steamer from Oran, touching at the Canary Islands and Porto Rico (Ponce & Mayaguez); he was robust, florid and healthy, subject, however, he avered, to chronic gingivitis specially, since he had had occasion to use mercurial inunction to rid himself of parasites. The history of his case was as follows: Since his arrival on the 3rd., he had lived very quietly, and had not frequented places of amusement or Cafés. He used to stroll in the City and occasionally along the wharf; but had never sailed on the Bay, nor gone to Punta de Sal or to any of the places which the two yellow fever patients were known to have visited. On the 17th. having taken his dinner as usual and gone to bed early, he was attacked at 10 P. M.

with severe vomiting and diarrhea with pain in the bowels which lasted through the night. In the morning finding himself better he went about as usual, and took his meals regularly till the afternoon of the 20th. when his fever commenced. He took a purge of castor oil, and called the physician on the 21st. The fever lasted until the 24th. defervescence taking place on the morning of the 25th. His temperatures had oscillated between 38º C. and 39' 4, reaching the maximum on the 24th. with 39' 6. A rash of irregular outline and disappearing on pressure had developed over the trunk and, less marked, over the limbs and neck, traces of it being still recognizable during convalescence, on the 29th. Albumen having been found in the urine on the 24th., he was reported as suspect of yellow fever. The diagnosis had been deferred until my visit to Santiago. From previous accounts given by the physicians I had surmised the possibility of a mild case of scarlet fever; but was informed that no case of that disease existed in the City, and no sore throat had been complained of, nor were there any signs of desquamation. After my examination, I concluded that the origin of the illness must be referred to the severe indigestion of the night of the 17th., and that some gastro-intestinal germ, thus introduced, had, after an incubation of three days, been the cause of the four days' fever as well as of the concomitant albuminuria and rash. The fact that the germ of yellow fever has been experimentally demonstrated to be inocuous when fed to non-immunes, would in that case exclude the diagnosis of yellow fever; I therefore agreed with the finding of the majority of the Commision who pronounced the case "not yellow fever." The usual precautions against contaminated mosquitoes and medical surveillance of the non-immunes were nevertheless maintained, according to our rule when the vote has not been unanimous.

Up to the present date (15th of December) no other suspicious case has been reported.

2. SPECIAL SANITATION AGAINST OTHER INFECTIOUS DISEASES.

The acute quarantinable diseases about which the Island of Cuba is particularly concerned are; Yellow fever, small pox, Cholera, and Plague. It is therefore very satisfactory to be in a position to declare that none of those diseases have developed in Cuba since the proclamation of the Republic, inasmuch as neither the two cases of yellow fever at Punta de Sal, in October and November, nor the one case of small pox, due to an accidental contagion at Las Animas Hospital, in June, have propagated beyond the original cases.

The number of diseases which physicians in Cuba are obliged to notify to the Sanitary Department may be thought unnecessarilly extensive, the list including no less than 41 diseases. Many of them, such as varicella, cholerine and "borras fever," are only listed for the purpose of avoiding errors of diagnosis through which individual cases of small pox, cholera or yellow fever might be overlooked. Others, as infantile enteritis, are placed on the list for the purpose of obtaining information which may throw light on the uncertain etiology of a disease which is responsible for a large proportion of the infantile mortality during the summer months. Malaria has also been included in our list as an important item in connection with our anti-mosquito campaign.

The measures taken against yellow fever have already been described in the preceding section. Against small pox, we trust entirely to the efficacy of prompt isolation of the patient, vaccination and revaccination of all the personnel which is allowed to approach the pa-

tient, and thorough disinfection of all objects that may have become contaminated. The efficacy of those measures has been fully demonstrated by the fact that notwithstanding the admission of seven confirmed cases of small pox imported from different ports since 1902, and treated at Las Animas Hospital, apart from the single individual case of accidental contagion already mentioned, the disease has never extended beyond the original cases. By the Cuban Law, vaccination against variola is obligatory for all Cuban residents.

Against diphtheria, isolation of the patient and the use of anti-diphtheric serum, prepared in Habana, has given excellent results, both for the curative and for the preventive treatment, no such accidents as have been else where reported having ever occurred in Cuba.

Cases of infectious diseases are isolated either at their homes, when the circumstances are satisfactory, or in some special Hospital, such as Las Animas, in Havana. At Santiago de Cuba, on the occasion of my recent visit, a similar hospital, on a smaller scale, has been authorised and will soon be available principally for cases occurring on shore, while the hospital at Cayo Duan will be reserved for imported cases. Special inspectors, appointed by the Superior Board of Health, have been stationed at the Daiquirí, Juraguá and Cobre Mines (the latter including Punta de Sal); they will report daily through the local Sanitary Officer the sanitary conditions at those stations. Two medical Inspectors, also appointed by the Superior Board of Health, will undertake the daily medical and sanitary inspection of all the houses in Santiago.

Through the local Sanitary Officer or through the Provincial Sanitary Officer, as the case may be, every infectious disease showing a tendency to spread is immediately notified to the Superior Board or to the Chief

Sanitary Officer of the Island; and, when necessary, either the Provincial Inspector or some special delegate designated by the Board is sent to investigate the case on the spot.

3. GENERAL SANITATION FOR THE PRESERVATION OF PUBLIC HEALTH

In the district of Havana, a well organised Sanitary Department had been established by the U. S. Government during the period of Military Intervention, and the same has been maintained under the Cuban Government with very satisfactory results and with the additional advantages of an efficient National Laboratory, divided into several sections: Bromatology, Pathological bacteriology, Legal medicine and epizootic investigations. Some sanitary improvements of a permanent character had already been accomplished, while others were completed by the Cuban Government.

In the rest of the Island, however, with very few exceptions, no permanent sanitary improvements had been achieved, and the task of bringing all its districts under the immediate control of the Central Sanitary Department, according to a plan carefully mapped out in one of the last Military Orders of Governor Gen. Wood, was left entirely to the Cubans. The organization of this service, in the matter of territorial protection against infectious diseases, judging from the results, has been very satisfactory. But the crippled condititon in which most of the districts were left after the war together with the low prices of the staple products of the country until quite recently, had so reduced their revenues, that the huge undertaking of remedying all the local sanitary deficiencies in those districts would have fallen upon the Central Treasury of the Island, leaving the latter unprovided for the more urgent demands of territorial protection against infectious di-

seases. The more promising outlook at the present time and the increasing prosperity of the Republic has been the occasion for the presentation of several bills which are being considered by the Cuban Congress for the purpose of contributing as far as possible towards the sanitary improvement of the principal districts of the Island.

In spite of the aforesaid circumstances, thanks to the consciencious efforts of the Central Sanitary Department, and also, no doubt, to the healthiness of the Cuban climate, the mortality over the whole Island has been low even as compared with the most favored regions outside of the tropics. With the exception of a short epidemic of typhoid fever in 1.902, and another of scarlet fever in 1903, both in Havana, and neither of them of long duration, we have been free from any other epidemic disease. There has been no yellow fever, saving the two individual cases at Punta de Sal, nor of small pox, except the one case, in June, at Las Animas Hospital; while the deaths from malaria have dropped to an insignificant figure almost all over the Island. The annual death rates per thousand, in the four last months have been, in the district of Havana: Aug. 19.42, Sept. 18.24, Oct. 17.31, Nov. 16.60, and for the whole Island: 15.51, 15.45, 13.40, and 14.0 *(?)* respectively.

For particulars about our sanitary resources the members are referred to our publications prepared for the Saint Louis Exhibition.

ESTADO SANITARIO de LA ISLA de CUBA

DESPUES DE LA PROCLAMACIÓN DE LA REPÚBLICA, POR EL DOCTOR CARLOS J. FINLAY JEFE DE SANIDAD DE LA REPÚBLICA.

Son tan variados y múltiples los aspectos de los problemas de profilaxis y saneamiento, que conviene advertir que, en el presente trabajo, me propongo examinarlos desde el punto de vista de un oficial de Sanidad de la América Tropical. Por ese motivo he dividido mi tema en tres partes, á saber: 1º Medidas sanitarias especiales contra la fiebre amarilla; 2º Medidas sanitarias especiales contra otras enfermedades infecciosas; 3º Medidas sanitarias generales para el mantenimiento de la salud pública.

MEDIDAS SANITARIAS ESPECIALES CONTRA LA FIEBRE AMARILLA.

Dada la poco envidiable reputación que, como centro principal de infección amarilla, había alcanzado la Haba-

na, y todo el territorio de la Isla, durante el siglo pasado, es natural que pongamos en primera línea este aspecto del problema al ocuparnos de la Sanidad de la República desde su fundación.

Gozó este Congreso en su tercera junta en Febrero del año 1901, el raro privilegio de escuchar la primera proclamación pública de una doctrina científica que, si no enunciada en aquella memorable ocasión por primera vez fué, por lo ménos, experimentalmente demostrada de manera que no debían de quedar dudas sobre su exactitud y solidez. No era de esperarse, sin embargo, á pesar de los argumentos concluyentes que allí se presentaron, que todos los delegados presentes adoptasen desde luego y absolutamente una doctrina demoledora de todas las teorías que venían sustentando con respecto al origen y propagación de la más temida de las infecciones americanas.

Se trató por varios modos de invalidar los experimentos demostrativos; pero sus autores habían tomado las precauciones necesarias para eliminar toda posibilidad de error. Apelose entonces al recurso conocido de expresar dudas sobre la competencia ó la imparcialidad de los peritos nombrados por la Comisión americana para dictaminar sobre los casos que esperimentalmente produjeron en la Habana en 1900—1901. En aquella ocasión oyeron los congresistas, de los labios del ilustre Presidente de la Comisión, Dr. Walter Reed, Comandante del Ejército americano, la brillante relación de las experiencias verificadas y de las conclusiones que de ellas se dedujeron. No podemos evocar el recuerdo de esos triunfos sin lamentar la muerte prematura de aquél laborioso investigador tan singularmente dotado de cualidades especiales para esta clase de estudios.

Experimentos ulteriores contribuyeron á aumentar el número de los que aceptaban las nuevas enseñanzas.

La confirmación por el Dr. Juan Guiteras en la Habana, el verano siguiente; la nueva serie de experiencias por la misma comisión americana; las de la Comisión del Servicio de Hospitales de Marina de los Estados Unidos en Veracruz en 1902; las de la Comisión brasileña de Sao Paulo, y finalmente los de la Comisión francesa del Instituto Pasteur, en Río Janeiro, en 1903, acabaron de convencer á todos los espíritus verdaderamente científicos de que el mosquito hoy llamado stegomya fasciata es un fácil transmisor de la infección amarilla. Muchos, sin embargo, se resistían aún á admitir que fuese el único agente transmisor.

Fué este el último baluarte donde se defendieron los no convencidos. Era ésta, sin embargo, una de las bases fundamentales de la doctrina, según la había concebido su fundador; y era precisamente aquella que le había guiado al descubrimiento de la especie de mosquito que propaga la enfermedad y á la invención del método preventivo contra dicha propagación, es á saber: impedir que los mosquitos de la especie mencionada piquen á los enfermos de fiebre amarilla y proteger á los individuos no inmunes contra las picadas de insectos que hayan picado á enfermos de fiebre amarilla.

Ha sido necesario que transcurran 36 meses de inmunidad no interrumpida en una localidad donde en el espacio de 100 años jamás había pasado un verano sin fiebre amarilla; 36 meses sin una sola manifestación autóctona de la infección en toda la República, juntamente con la convicción de que esta inmunidad sólo podía atribuírse á la observancia de los principios antes mencionados; necesitóse, pues, todo esto para disipar por completo las dudas y para que se diese por comprobado el hecho de que son suficientes las medidas ya indicadas, y que, si se ponen estrictamente en vigor, se pueden introducir impunemente pacientes de fiebre amarilla en

los mismos focos que llamabámos endémicos de la afección.

Al Coronel W. C. Gorgas del Ejército americano, que fué Jefe de Sanidad de la Isla hasta el 20 de Mayo de de 1902, cabe la gloria de haber sido el primero en erradicar la fiebre amarilla de la Habana; triunfo que logró en el espacio de siete meses que terminaron en Septiembre de 1901, por la observancia estricta de las reglas fundamentales ya expresadas. Eliminar la fiebre amarilla de la Habana significaba su desaparición de todo el territorio nacional, puesto que no existía en toda la Isla otro centro de población que reuniese el número de habitantes no inmunes suficiente para mantener por sí solo un centro epidémico permanente, si se tiene en cuenta que al mismo tiempo el servicio de cuarentenas ejercía la más rigurosa vigilancia para impedir la introducción oculta y desatendida de enfermos de fiebre amarilla ó mosquitos infectados por puertos cubanos.

Después de ocho meses de inmunidad, en Mayo de 1902, cuando se proclamó la República de Cuba, muchos médicos dudaban aún, atribuyendo esa inmunidad al invierno y primavera, profetizando la reaparición de la epidemia tan pronto se iniciase el verano. Pero sus presagios no se vieron cumplidos.

Hasta el día de hoy (Diciembre 1904), haciendo abstracción de 2 casos confirmados que vinieron de puertos extranjeros, no ha ocurrido uno solo de fiebre amarilla en la Habana, de origeen autóctono, ni hasta hace dos meses en ninguna otra parte del territorio cubano. Explicaremos esa distinción.

La primera interrupción de ese período de inmunidad que se había sentido en toda la Isla en los 36 meses anteriores, fue notificada á la Junta Superior de Sanidad, por las autoridades de Santiago de Cuba, el 20 de Octubre del presente año.

La Compañía Minera del Cobre, cuyas fundiciones se encuentran en Punta de Sal, inmediatas á la costa y próxima á la entrada del Puerto de Santiago, como á una distancia de seis millas de la ciudad, empleó á un americano que había llegado á Santiago de Cuba el 27 de Septiembre. Este individuo se enfermó el 17 ó 18, pero no fué visto por ningún médico hasta el día 20 de Octubre en que se dió á conocer inmediatamente, como sospechoso de fiebre amarilla, diagnóstico que se confirmó por la Comisión de enfermedades infecciosas de Santiago de Cuba.

El origen de este caso no se pudo atribuir á ningún otro en la ciudad ni en Punta de Sal ó en el personal de las Minas del Cobre. Se presume que pueda haber sido causado por algún mosquito infectado que hubiese escapado de los buques detenidos en cuarentena, en la bahía de Santiago. Es posible que alguno de esos insectos hubiese sido transportado de la cubierta del buque por una racha de viento que lo llevase á algún cuerpo flotante y lo trasladara así la marea hacia Punta de Sal, donde se internó y picó al enfermo algunos días antes de su ataque. (1)

Tan pronto se tuvo conocimiento en la Habana de ese caso, se comisionó al Dr. Juan Guiteras para que lo investigase, trasladándose enseguida á Santiago de Cuba, acompañado de empleados expertos del Departamento de Desinfección de la Habana. El Dr. Guiteras confirmó el diagnóstico é inmediatamente ordenó una completa desinfección de mosquitos, no solamente en la casa ocupada por el enfermo, sino en toda la vecindad. Se llevó á cabo una cuidadosa inspección en las minas del Cobre y en las poblaciones vecinas, practicándose además, la des-

(1) Confirmando esta manera de transmitirse véase mi libro de Notas vol. II f. 143 y mi explicación del caso curioso del "*tailleur de pierre*" en St. Nazaire. Revista de medicina tropical, Julio 1903. f. 143.

infección de las casas y destruyéndose hasta donde fué posible, todos los criaderos de mosquitos, habiendose tratado de igual modo, todas las casas y lugares que habian sido visitados por el enfermo antes de comenzar el mal. El caso había sido traslado al lazareto del Cayo Duan antes de la llegada del Dr. Guiteras. Simultáneamente se llevó á cabo un censo de todos los individuos no inmunes y se les impuso una cuarentena dentro de ciertos límites mantenidos con la cooperación de la policía, practicando una inspección médica diaria de esos no inmunes durante quince días.

El 31 de Octubre, diez dìas después de haber sido trasladado á Cayo Duan el primer caso, y 13 ó 14 de la invasión, se recibió otra notificación de estar atacado un americano, no inmune, de una infección que se sospechaba fuera la fiebre amarilla, sospecha tanto más justificada, cuanto que ese individuo había dormido en el mismo cuarto que el enfermo anterior y le había atendido en los primeros días. Este segundo caso, se llevó inmediatamente, protegido contra los mosquitos, á Cayo Duan, repitiéndose, como era consiguiente, las medidas de desinfección y vigilancia médica de los no inmunes. Este caso, aunque benigno, fue confirmado y ratificado por el Dr. Agramonte que había sido nombrado en la Habana para una comisión análoga á la del Dr. Guiteras, y se tomaron todas las precauciones para evitar la propagación de la enfermedad. Desde esa fecha, Octubre 31, no se ha registrado ningún otro caso de fiebre amarilla.

Sin embargo, hay otro caso que á pesar de haber sido declarado que "no era fiebre amarilla", merece ser consignado. Se trata de un cubano, de 21 años de edad, nacido en Santiago pero que había vivido en Francia y en Argel desde que tenía cuatro años de edad. Regresó á Santiago, acompañado de su familia el 3 de Noviembre, después de una travesía haciendo escalas en las Canarias y Puerto Rico (Ponce y Mayagüez), hombre robusto y sa-

ludable. Sufría de una gingivitis crónica, más marcada desde que usó una pomada mercurial para combatir algunos parásitos.

La historia de este caso es la siguiente: desde su llegada, el dia 3, tuvo una vida muy tranquila, pues no frecuentaba lugares de recreo ni cafés. Recorriendo la ciudad y algunas veces los muelles, pero nunca hizo excursiones á la bahía ni visitó á Punta de Sal ó lugares que se supiera hubiesen sido visitados por los enfermos de fiebre amarilla. El día 17, después de haber comido como de costumbre, se recogió temprano y á las diez p. m. se sintió enfermo con vómitos y diarreas acompañadas de dolores intestinales que duraron toda la noche. A la mañana siguiente, sintiéndose mejor, se levantó haciendo su vida regular hasta la tarde del día 20 en que se presentó la fiebre; tomó un purgante y llamó un médico el día 21. La fiebre duró hasta el 24 comenzando la defervecencia en la mañana del 25. La temperatura osciló entre 38º y 39º4 alcanzando su máximo, 39º6, el día 24. Un *rash* irregular y que desaparecía á la presión, se desarrolló en el tronco, siendo menos marcado en las extremidades y cuello, dejando tras sí marcas reconocibles en la convalescencia. Habiéndose encontrado albúmina el día 24, se notificó como sospechoso de Fiebre Amarilla, posponiéndose el diagnóstico hasta mi llegada á Santiago.

Por los datos anteriores, suministrados por el médico de asistencia, pensé en la posibilidad de un caso de Escarlatina: pero fuí informado de que no existía ningún caso en la ciudad y de que no había habido dolor de garganta ni signo alguno de descamación. Después de mi examen, hice la conclusión de que el origen del mal sólo podía atribuírse á la indigestión en la noche del 17 y que algún germen gastro-intestinal, introducido de ese modo, después de una incubación de tres

días, había sido la causa de los cuatro días de fiebre así como de la albuminuria y *rash* concomitantes. *El hecho, demostrado experimentalmente, de que la ingestión del germen de la fiebre amarilla es inofensiva, excluiría en ese caso el diagnóstico de fiebre amarilla;* por consiguiente, quedaba de acuerdo con la mayoría de la Comisión, declarando que el caso no era de fiebre amarilla. Las precauciones contra los mosquitos infectados y la vigilancia médica de los no inmunes se estableció, apesar de todo, pues esa es la conducta que observamos cuado la opinión no es unánime.

Hasta la fecha (Diciembre 18), no se ha presentado ningún otro caso sospechoso.

MEDIDAS SANITARIAS ESPECIALES CONTRA OTRAS ENFERMEDADES INFECIOSAS

Las enfermedades cuarentenables agudas que más relación pueden tener con Cuba son la Fiebre Amarilla, Viruelas, Cólera y Plaga. Es, por consiguiente, muy satisfactorio declarar que ninguna de esas enfermedades se ha desarrollado en Cuba desde la proclamación de la República, tanto más cuanto que ninguno de los dos casos de Punta de Sal, en Octubre y Noviembre, ni el caso de viruelas debido á un contagio accidental en el Hospital "Las Animas" en Junio, se han extendido fuera de los casos originales.

El número de enfermedades que los médicos de Cuba están obligados á notificar al Departamento de Sanidad puede, á primera vista, considerarse innecesariamente extenso puesto que la lista comprende un número no menor de 41. Muchas de ellas como la Varicela, Colerina y "fiebre de borras" han sido incluídas con el objeto de evitar errores de diagnóstico por los cuales algunos casos de viruelas, cólera ó fiebre amarilla pudieran pasar desapercibidos. Otras, como la enteritis

infantil, se han agregado con el fin de obtener algunos datos que puedan aclarar la etiología de una enfermedad que produce gran mortalidad infantil en los meses de verano. El Paludismo también se ha incluído como un importante medio de llamar la atención de la brigada de mosquitos " Anopheles".

Las medidas contra la fiebre amarilla se han descrito en la sección anterior. En cuanto á la viruela, tenemos absoluta confianza en la eficacia del inmediato aislamiento del enfermo, vacunación y revacunación de todo el personal que haya tenido contacto con el enfermo y la desinfección de todos los objetos que puedan haberse contaminado. La eficacia de estas medidas está demostrada por el hecho de haber tratado siete casos confirmados de viruelas importados de distintos puertos desde 1902 y tratados en el Hospital "Las Animas," sin que haya ocurrido ningún indicio de su propagación, más el caso individual, ya citado, de contagio accidental. Por la ley cubana la vacunación anti—variolosa es obligatoria á todos los habitantes de Cuba.

En relación con la difteria ha dado excelentes resultados desde el doble punto de vista curativo y preventivo, el uso del suero anti-diftérico preparado en la Habana sin que hayan ocurrido accidentes que en otros lugares han dado á conocer y que nunca se han presentado en Cuba.

Los casos de enfermedades infecciosas se aislan en sus domicilios cuando así lo permiten las circunstancias de los mismos, ó bien en hospitales especiales como "Las Animas" en la Habana. En Santiago de Cuba y con ocasion de mi visita á esa ciudad se ha autorizado y estará pronto listo á recibir enfermos de tierra, un hospital similar, en menor escala que el de la Habana, y se reservará el Hospital de Cayo Duan para los casos de Sanidad marítima.

Se han nombrado además Inspectores especiales que la Junta Superior de Sanidad ha estacionado en los distritos mineros de Daiquirí, y Juraguá y Minas del Cobre [incluyendo Punta de Sal], para que diariamente informen por medio del Jefe de Sanidad local la condición ó estado de esos lugares. De igual modo se ha creado una inspección médica y sanitaria en todas las casas de Santiago de Cuba.

Los Jefes locales de Sanidad y los Inspectores Médicos Provinciales, según sea el caso, están obligados á informar á la Junta Superior de Sanidad de toda enfermedad infecciosa que tienda á hacerse epidémica, y cuando se estima necesario se ordena al Inspector Provincial ó á un Delegado especial, que se traslade al lugar para investigar las causas.

MEDIDAS SANITARIAS GENERALES PARA EL MANTENIMIENTO DE LA SALUD PUBLICA

Durante el período de intervención militar del Gobierno de los Estados Unidos se estableció en la Habana un bien organizado departamento de Sanidad, que ha sido mantenido con resultados muy satisfactorios por el Gobierno de Cuba que le ha hecho la muy ventajosa adición de un Laboratorio Nacional dividido en varias secciones: Bromatología, Bacteriología, Medicina legal é Investigaciones epizoóticas. El Gobierno americano realizó algunas mejoras de carácter permanente y otras han sido completadas por el Gobierno de Cuba.

En el resto de la Isla, sin embargo, con muy pocas excepciones, no se han hecho reformas sanitarias de carácter permanente y la empresa de colocar todo los distritos bajo la inmediata dirección del Departamento General de Sanidad, que fué trazada por una orden militar del General Wood, quedó á cargo del Gobierno de Cuba. La organización de este servicio, desde el punto de vista de la protec-

ción territorial contra las enfermedades infecciosas, juzgada por sus resultados, ha sido muy satisfactoria. Pero las pésimas condiciones en que se encontraban esos distritos después de la guerra y los precios bajos de los productos locales mantenidos hasta hace poco tiempo, redujo sus ingresos de tal manera que la empresa enorme de remediar todas esas deficiencias sanitarias hubiera recaído sobre el Tesoro General de la Isla, dejándole sin recursos para atender á las necesidades más urgentes de la protección especial contra las enfermedades infecciosas. La hermosa perspectiva del presente y el aumento de prosperidad de la República han dado ocasión á la presentación de algunos propectos de ley en el Congreso Cubano, que tienden, tanto como sea posible, al mejoramiento de las condiciones sanitarias de los principales distritos de la Isla.

Apesar de las condiciones citadas, y gracias á los esfuerzos del Departamento de Sanidad, así como indudablemente á la salubridad del clima cubano, la mortalidad general de Cuba ha sido baja aun comparada con las regiones no tropicales más favorecidas. Con excepción de una corta epidemia de Fiebre Tifoidea en 1902 y otra de Escarlatina en 1903, ambas en la Habana y ninguna de ellas de larga duración, hemos estado libres de toda otra enfermedad epidémica. No ha habido Fiebre Amarilla, salvo los dos casos de Punta de Sal, ni hemos tenido Viruelas, con excepción de un caso, en Junio en el Hospital "Las Animas", mientras que las muertes por paludismo han disminuído considerablemente en casi toda la Isla. La mortalidad anual por mil, durante los últimos cuatro meses, en el Distrito de la Habana es la siguiente: Agosto, 19.42; Septiembre, 18.24; Octubre, 17.31; Noviembre, 16.60; y para toda la Isla: 15.51, 15.45, 13.14 y 14.0 (?) respectivamente.

Para más detalles acerca de las medidas sanitarias

aquí observadas, invitamos á los señores miembros á que lean nuestras publicaciones presentadas en la Exposición de St. Louis.

DIFFERENTIAL DIAGNOSIS

BETWEEN COXA VARA AND OTHER STATIC, INFLAMMATORY AND TRAUMATIC AFFECTIONS OF THE HIP JOINT. * By.

NICHOLAS SENN, M.D.—CHICAGO.

The surgeon not infrequently meets with cases in which it is extremely difficult and sometimes impossible to make an early and positive differential diagnosis between the different forms of static, inflammatory and traumatic affections of the hip joint. The diagnosis of the different affections of the hip joint has gained much by the use of the Roentgen ray as one of our modern and most reliable diagnostic resources, and in obscure affections of the hip joint it should invariably be resorted to; in the majority of cases the information thus gained will forge the last link in the long chain of diagnostic reasoning by exclusion. Even this diagnostic aid, owing to the complicated structure of the hip

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* Presented in abstract to the Pan—American Medical Congress, Panama, January, 1905.

joint, its deep location and diversity of function, will fail in some cases in clearing up the existing doubt. As an isolated dianostic aid, it will not infrequently lead the surgeon astray in his search for a correct diagnosis. A careful, painstaking clinical study of the case from all aspects, anatomic, physiologic, mechanical, etiologic, and pathologic, must precede the use of the Roentgen ray, which should only be employed as a diagnostic resource in verifying or correcting the clinical diagnosis. Among the newest, most obscure and least understood deformities of the hip joint is an affection of the femoral neck which manifests itself clinically and pathologically by softening, bending and torsion known and described as coxa vara.

This strange joint disease has not received from the American surgeons the attention its clinical importance merits. Few outside of Germany have made it the subject of special investigation. For a long time pathologists and surgeons have been aware of the existence of a strange deformity of the femoral neck which by mechanical causes seriously interfered with the use of the affected limb and for which they could give no satisfactory explanation. Specimens of this kind can be found in some of the old pathologic museums where they were stored away years ago awaiting a satisfactory interpretation of their pathologic significance. Orthopedic operations were repeatedly performed for the purpose of improving function in cases which are now known to have been instances of coxa vara. It was not, however, until 1888 that coxa vara was made the subject of an earnest clinical study by E. Müller, who proved by his careful observations that it was a disease of the neck of the femur entirely different from any of the then known diseases of the proximal end of that bone. Six years later, and almost simultaneously, Hofmeister and Kocher made valuable contributions to the pathology

and clinical history of this disease. Before a true conception of the clinical features of coxa vara was formulated by these pioneers in this part of the surgery of the hip joint, this disease was confounded with the inflammatory affections of the proximal end of the femur, and was diagnosticated and treated as coxitis. A genuine coxa vara is characterized by a non-inflammatory softening of the neck of the femur, accompanied or followed by a downward bending and torsion.

As a knowledge of this disease became more general, it soon became apparent that other affections of the neck of the femur were included under the term coxa vara. Kredel was the first to call attention to the congenital form of the disease and reported two cases that came under his own observation. Similar cases were observed later by Mouchet, Aubion, Schede and Kirmisson. Kirmisson is of the opinion that the congenital form is caused by harmful intrauterine pressure. Distortion of the neck of the femur simulating coxa vara has also been observed in cases of congenital dislocation of the hip joint, more especially in long-standing cases. Wagner describes a case of this kind from Hoffa's clinic. It has also been seen in osteomalacia, and Hofmeister and Alsberg have each reported such a case. Rachitis is likewise frequently mentioned as a cause of coxa vara, and such cases are spoken of as coxa vara rachitica. Lauenstein found in a rachitic skeleton the angle of the femoral neck on one side diminished, and on the other increased. Hoffa states that coxa vara rachitica is not of very rare occurrence, while Charpentier, who examined many rachitic skeletons, did not find a single specimen in which the neck of the femur was in a horizontal position. Nearly all authors agree in admitting that all inflammatory affections, chronic and acute, tubercular and suppurative, may give rise to distortion of the neck of the femur simulating coxa vara, and cases in

support of this opinion have been described and reported by Volkmann, Schede, Stahl, Oberst, Bruns, and others.

Arthritis deformans has much in common with the deformity of the neck of the femur, caused by coxa vara, and Kirmisson and Charpentier regard the two conditions as identical. In two cases of coxa vara operated on by Maydl, the specimens presented the gross pathologic changes typical of arthritis deformans. A form of traumatic coxa vara has been described in connection with a trauma resulting in epiphyseolysis and fracture of the femoral neck. Several of the authors who have contributed most toward elucidating the pathology of coxa vara, among them Kocher, Alsberg and Sudeck, insist that separation of the head of the femur from the neck in persons below the age of puberty can take place in consequence of very slight application of force, and that the displacement of the head and the subsequent manner of repair will give rise to a deformity which corresponds with the clinical phenomena of coxa vara. De Quervain reports a case of fracture of the neck of the femur operated on by Kocher in which such a condition was found. Two similar cases have been reported by Sudeck aud Alsberg. From the foregoing, it becomes apparent that even at the present time much confusion exists in reference to the limitation of the term coxa vara from an etiologic, as well as from a pathologic, standpoint. That there is such a thing as a non-inflammatory, non-traumatic softening of the neck of the femur in young subjects, followed or attended by deformation, there can be no further doubt, and it seems to me that the term coxa vara should be limited to such cases, or at least this form should be called coxa vara *vera*, in contradistinction to the somewhat similar deformation produced by traumatic and inflammatory causes; in other words, deformations of the femoral neck should be classified on an etiologic basis, the only firm

Fig. 1.—Bending downward of the neck of the femur with elongation and flattening of the head.

and sound foundation for a rational nomenclature of this as well as of any other disease.

I have had an opportunity to examine in my practice three cases of coxa vara; two in my clinic in Rush Medical College, and one in private. I have undoubtedly had my share of cases that I did not recognize before this disease was known, and I have done what others have done before that time, diagnosticated and treated them as cases of tubercular coxitis. These cases did not suppurate and the patients eventually recovered with good functional result. The two clinical cases mentioned presented the usual evidences of this disease. Both patients were young men between sixteen and eighteen years of age. Rest and the internal administration of phosphorus in minute doses constituted the treatment. In one of these cases the acute stage lasted over a year. I made use of phosphorus under the belief that the softening of the bone was the result of a late localized rachitic process, and that this drug might possibly have the same salutary effect as in the general infantile form of the disease. The third case is of more than ordinary interest, owing to the advanced age of the patient. In forty cases of coxa vara collected by Hofmeister and Frazier, the oldest patient was twenty-one, and all authors place stress on the well known fact that this disease is met with only in children and in adolescents, and in Frazier's table it will be seen that by far the largest number of cases were between fourteen and eighteen years of age. In all probability a doubt will be raised in the minds of many concerning the correctness of the diagnosis in this case, and it will be alleged that the deformity of the neck and head of the femur was caused either by fracture or by senile arthritis. A careful study of the clinical history and inspection of the photographs and Roentgen photogram (Fig. 1) will exclude the possibility of a mistaken diagnosis.

Patient.—A man, aged 42, belongs to a long-lived family, and is free from any hereditary taint.

History.—He is a native of this country and was engaged in literary work. He is married, but childless. He is five feet nine inches in height and weighs 129 pounds. With the exception of a moderate use of alcohol and tobacco, his habits are faultless. He has passed through the ordinary diseases of childhood, with the exception of diphtheria. He gives no history of typhoid fever or pneumonia; on the contrary, his general health has been excellent. At the age of 27 he contracted syphilis, followed by mucous patches and characteristic cutaneous eruption.

Present Illness.—Three years ago he experienced a dull aching pain in the right hip joint, alternating with lancinating pains extending along the anterior surface of the thigh as far as the knee. The pain came on in paroxysms which would last for about two weeks, followed by painless intervals of several days' duration. There was no tenderness and no impairment, of joint motion; the pain was not aggravated by standing or walking. Last February he was suffering from one of these painful attacks and had become slightly dizzy; when in the act of carrying two coal scuttles filled with ashes he slipped on the ice and fell with full weight squarely on the buttocks. He immediately regained his feet and finished his task without any apparent ill effects from the fall, and repeated the same work. When he reached home, soon thereafter, he perspired freely, and when he sat down to table he felt "stiff" all over. Next day, about noon, he experienced severe pain in the affected hip joint on walking, and went home in a cab, and the same evening he had to resort to the help of a cane to enable him to walk. Osteopathic treatment seemed to improve his condition. Ten days later, in ascending the stairs, he slipped and fell lightly on hands and knees, and then rolled on the right side, but experienced no immediate untoward symptoms, and climbed the stairs, but on reaching the top the pain in the hip became more severe and he could not stand without some support. The next morning, on leaving his bed, the pain remained quite severe, and was aggravated by flexion and rotation of the thigh. The lameness increased, and a week later the patient became aware that the affected limb was shorter. He has never been confined to bed, and at the time he consulted me, last fall, he walked with a decided limp, but without the aid of any mechanical support. General health of patient is good.

Examination.—There is flat-foot on both sides. The right limb, especially the gluteal region, is markedly atrophic. The trochanter major is abnormally prominent, the gluteal crease is two inches lower than on the left side (Fig. 2). Cnmparative measurements revealed a shortening of an inch and a half, and the great trochanter is displaced the same distance above the Roser-Nélaton line. At the base of Scarpa's triangle a slight prominence can be felt. The right limb is slightly rotated outward; there is no adduction of thigh. Standing on the left limb, the patient can execute all movements of the thigh

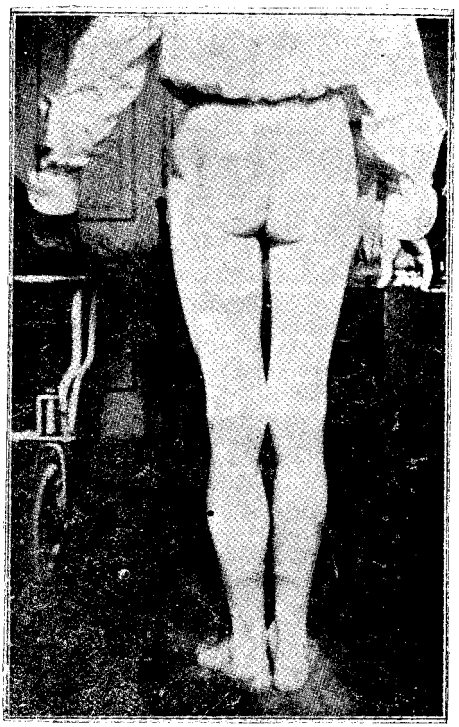

Fig. 2.—Right trochanter major abnormally prominent. Gluteal crease two inches lower on right side.

freely, without pain, and in all directions, except full abduction. There is no tenderness and no pain. The paroxysmal attacks of pain subsided months ago, and the function of the limb has been improving slowly but steadily. He walks with a decided limp and all he complains of is a muscular weakness and functional defects which will yield to a considerable extent to restoration of the equilibrium of the body by increasing the thickness of the sole of the shoe on the affected side, to make up for the degree of actual shortening, electricity and massage.

Remarks.—The Roentgen picture ilustrates the bending downward of the neck of the femur to a horizontal level, elongation and flattening of the head of the femur (Fig. 1). It is not likely that either injuries resulted in an infraction, much less a complete fracture, but there can be no question that they resulted in each instance in an aggravation of the pre-existing local difficulty. The spontaneous recovery, as well as the degree of bending downward of the neck of the femur in its entire length and the complete absence of neoplastic inflammatory products, exclude absolutely the possibility of arthritis deformans or senile coxitis. The clinical history as well as the intra-articular conditions revealed by the *x*-ray could not possibly give rise to a suspicion of tubercular coxitis. The posterior bending of the femoral neck in this case was slight, consequently little backward displacement of the great trochanter; hence the comparatively good remote functional result. If this is a case of coxa vara *vera*, as I believe it to be, it would prove that this disease is not limited to the bone-growing period of life, and that it may, at least in rare cases, attack the adult.

ETIOLOGY

Very little is known concerning the true nature of coxa vara. The authors admit that the softening of the neck of the femur is the most important element which gives rise to the subsequent deformity which is largely due to the superimposed weight of the body. Kocher and Langhans claim that the softening is caused by a localized juvenile osteomalacia. Others regard it as a late form of local rachitis.

Küster reports a case in which he attributed the characteristic distortion to ostitis fibrosa. Whitman and Sudeck believe that the yielding of the femoral neck can take place without previous softening of the bone by gradual changes in the architectural dispositon of the supporting and traction arches in the bone under