

Delthil employs frequent inhalations, lasting 10 minutes, of—

Oil of turpentine	...	...	190 grammes.
Camphor	...	...	6 "
Benzoic acid (Benjoin)	...	...	2 "
Iodine	...	...	2 "

D. M. MOIR, M.A., M.B.,  
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### SELECTIONS.

BUCHNER, H. *Cholera Theories and the necessity for further Research (Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege. Bd. XXV, Heft 3. p. 432 ff).*

In his work the author discusses Koch's doctrine of the contagiousness of cholera, and declares it not capable of solving the enigma. It, however, settled the localistic theory, which is more closely discussed in the second part of the treatise. In his arguments the author brings forward much old and new matter, both for and against both theories, and further puts the question whether there is an ectogenous stage of cholera vibrios, and concludes that the same is generally unnecessary, and that there is no such proof that we should accept the same as an important additional factor (Hélfshrsache) of cholera epidemics. Further, the local and seasonal predisposition for cholera epidemics is dealt with. A great part of the work is taken up by the author's suggested diblastic theory. Buchner asserts that for the development of cholera it is necessary that there should be a defect or lesion in the epithelium of the intestinal canal, but that the same is not caused by the cholera bacterium but by some other medium, probably amœbæ. Numerous examples are brought forward in the work and many new questions raised. It being impossible to enter here into these questions singly, the work must be read in full; the reader's attention is here only drawn to the contents of the work.—(*Centralblatt für Bakteriologie und Parasitenkunde Bd. XV. No. 19-20.*)

KARLINSKI'S SHORT CONTRIBUTIONS TO THE ÆTIOLOGY OF CHOLERA.—The author quotes here a few of the cholera studies conducted in his Arabian journey which have already been published in the *Hygienische Rundschau*, 1894. It treats of the results of bacteriological investigations in which the cholera bacilli were not demonstrable *intra vitam*, and others in which they were found where no cholera symptoms had ever taken place.

*Case I*—Refers to a man with liver affection who fell ill presenting cholera symptoms. Experiments with peptone culture and gelatine gave negative results. Death after eight hours; very numerous cholera bacilli were then found in the cœcum.

*Case II*.—In stools 4—8 no cholera bacilli demonstrable, and the culture only succeeded 36 hours after beginning of symptoms.

*Case III*.—Cholera spirillæ found after commencement of the purging; they were not found 24 hours later. Only on the 5th day, when the stools became more consistent, they were found in large quantities.

*Case IV*.—No cholera bacilli demonstrable in the rice-water stools for ten days; only after administration of calomel on the 10th day in half solid stools they were found and so virulent that they killed guinea-pigs in seven hours.

*Cases V—VI*.—After long absence cholera bacilli appeared suddenly in the stools during convalescence.

*Case IX*.—In the case of a laboratory servant in good health, cholera bacilli were discovered in his stools, were demonstrable for four days, and disappeared without producing any reaction or disturbance.

The author further informs us that he quite casually discovered bacilli in his own stool, which neither in gelatine cultures, nor indol reaction or experiments on animals showed any distinction from cholera bacilli; but with the exception of a somewhat more liquid stool, he experienced no inconvenience whatever. The author had an attack of cholera in 1892, which perhaps gave him immunity.

In 293 experiments cholera bacilli were found 81 times in pure culture in the intestine, 99 in combination with bacterium coli only, and 110 times in combination with this and *Bacillus Proteus Hauser*, so that Nencki's theory, who shows the workings of the cholera bacillus only through "symobione" and three other bacilli, is no longer tenable.

The cholera vibrios remained alive in stools in one case 52 days, while other specimens showed no living germs on the 16th day.

With regard to the disinfection by means of sunlight, the author placed pieces of cloth soaked in cholera dejecta in the sun with a temperature of the sand of 40.3 and 46.4 of the atmosphere. After two hours no more living cholera germs were to be seen. The same results were obtained in experiments with pure cultures of comma bacilli. In a temperature of 39.40 C. in the shade cholera dejecta shewed no living germs after three hours, while in pure cultures living germs were still found.

Pieces of linen kept in a box at a maximum temperature of 44C. for 17 days neither gave in the dejecta nor in pure cultures any further cultures. Similar experiments will be shortly published.—(*Centralblatt für Bakteriologie und Parasitenkunde Bd. XV No. 19-20.*)

PETTENKOFER: *Measures against Cholera; the Sanitary Condition of Lunatic Asylums, Infirmaries, Workhouses, Prisons and Reformatories; Opinion of the Imperial Medical Commission, Münch. Med. Wochenschrift 1894, No. 10.*—The questions of the Cholera Commission on the sanitary arrangements of the abovenamed Bavarian institutions were replied to by 42 of these institutions. The result of the enquiries can, on the whole, be regarded as satisfactory. The commencement of the development of cholera and abdominal typhus in the different institutions is of great interest, but of 42 only 8 were the seat of cholera, out of which 5 were in Munich. The number of abdominal typhus was 20. The relative number of cholera and typhus cases of former years and the present is very instructive, showing the effect of sanitation in the institutions, as, for instance, in the case of a House of Correction at Kaisheim. In regard to the frequency of typhus, cases showed a great dependence on the seasons; the frequency of typhus, in that case as in Munich, cannot be ascribed to the drinking-water, as on the introduction of spring water, typhus did not at once disappear; but this result was obtained only by drainage of the infected soil; infirmaries, as well as prisons, shew that the cases of house infections which occur cannot be ascribed to contagion or attributed to drinking-water. One of the most striking examples is that of the hospital on the left bank of the River Isar in Munich. Until recent years this hospital was a hot-bed of infection, alike for sick and attendants, both with typhus and cholera. Neither in Munich nor in any of the other institutions of the kingdom could the movements of typhus and cholera be ascribed to water in the sense of the infected drinking-water theory. Water may be a carrier of infectious germs without producing diseases if the germs are not held in sufficient quantity; in all experiments up to date typhus and cholera germs have been found in water only in very small proportions, so it may be considered that the germs, even if they be brought into the house by means of water, must find a further breeding medium in which they may develop to the necessary degree of concentration and virulence. Considered from a purely practical point of view, it is clear that local sanitation to which clean water belongs, is the best protection and that anti-contagious measures are unnecessary.

Typhus has been driven out of Munich without disinfection.

In conclusion, the author expresses a wish that, as is done in England, Germany also should follow more the localistic than contagious doctrines, and not interfere needlessly with personal liberty and commerce.

P. RIGBY, M.D.

## Vital Statistics & Sanitation.

BULLETIN FROM CALCUTTA MUNICIPAL LABORATORY.

*Anti-Cholera Inoculations from 25th of July to 24th of August 1894.*

MAHOMEDANS.					HINDOOS.					OTHER CASTES.					GRAND TOTAL.			
ADULTS.		CHILDREN UNDER 12 YEARS.			TOTAL.	ADULTS.		CHILDREN UNDER 12 YEARS.			TOTAL.	ADULTS.		CHILDREN UNDER 12 YEARS.			TOTAL.	
Male.	Female.	Male.	Female.	Male.		Female.	Male.	Female.	Male.	Female.		Male.	Female.	Male.		Female.		Male.
14	1	9	5	29	73	38	46	54	211	6	..	..	..	6	246			

*N. B.*—Of 211 Hindoos inoculated, 9 were Brahmins. Cholera cases occurring in houses where inoculations had been done:—

1. In Jodunath Chakravarty's house at 155, Upper Chitpore Road Bustee, 4 members out of a family consisting of 11 were inoculated on 11th August 1894. One out of the not inoculated 7 was attacked by cholera on 13th August. This case has now ended in recovery.

2. In H. L. Mukerjee's Cooly Dépôt at 2, Chattoo Baboo's Lane, Ward 19, 25 persons inoculated out of 58. One out of the not inoculated 33 was attacked by cholera on 13th August and died on 15th August.

3. In Narain Mistree's house at 155, Upper Chitpore Road Bustee, 3 members out of a family consisting of 11 were inoculated on 11th August 1894. One out of the not inoculated 8 was affected with cholera on 14th August and died on 15th August.

There was no case of cholera among the inoculated.

W. J. SIMPSON, M.D.,  
Health Officer.

### THE KID AS A VACCINIFER.

By SURGEON-MAJOR EDWIN DOBSON, M.B., I.M.S.,  
Offg. Superintendent of Emigration, Calcutta.

WHILST Civil Surgeon of Shillong I was also in charge of the bovine vaccine dépôt at that station. As an experiment seven kids were operated on by scarification, which is the mode of operation invariably performed on calves at this dépôt. In Assam I have found, if the people will submit to vaccination at all, the source of the supply is immaterial to them. Such being the case, I cannot see where the advantages for substituting the goat for the calf in this province would come in, even presuming the results obtained eventually are better than they have been, especially as the quantity of lymph obtained from the goat is so very small compared with that obtained from the calf, to say nothing of the almost continuous bleating of the goat all the time it is tied down on the operating table, which is most distressing to listen to. My experience of vaccinators does not warrant my trusting these persons with anything but the preserved lymph distributed to them bi-weekly in regular supplies from a vaccine dépôt.

*Goat No. 1* was vaccinated successfully with humanized and bovine lymph on 27th October 1893, and a child was vaccinated with the lymph collected on the 31st, but failed.

*Goat No. 2* was vaccinated successfully with humanized lymph only on 10th February 1894, and two children were vaccinated with the lymph collected on the 14th. In both children the vesicles were imperfect.

*Goat No. 3* as vaccinated successfully with bovine lymph only on 10th February, and two children were vaccinated with the lymph collected on the 14th, but failed.

*Goat No. 4* as vaccinated on 14th February with lymph obtained from goats Nos. 2 and 3, but the goat died on the fifth morning from violent convulsions, which came on suddenly two hours before the time the lymph was to have been taken. The vesicles were perfect.

*Goat No. 5* as vaccinated with humanized lymph on 23rd February, but failed.