

SOME PRACTICAL POINTS IN THE DIAGNOSIS OF PLAGUE.

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THE diagnosis of plague is not surrounded in this country with the difficulties which are met with in the East. Among these are: (1) the forbidden examination of women in most cases, (2) the difficulty of languages, (3) the absolute disregard for truth among native races, (4) the fear of plague officials, and (5) the usual lack of facilities for bacteriological examination, which all operate against the medical officer endeavouring to investigate a suspected case of plague in India and Eastern countries generally. The assistance of the general public in the observation of plague regulations may be safely counted upon in this country, and actual hostility on the part of the people, such as occurred in India, at Port Said and at Oporto, would be altogether improbable.

The small number of cases that are at present likely to occur at one time in any place in these islands makes it possible to fully investigate each instance from the clinical, pathological, and bacteriological aspect. Mistaken diagnoses, though they may occur to a slight extent, cannot hide the existence of plague for any length of time, and even in the poorest parts of a crowded city the lack of medical attendance during the illness of the patient would not be sufficient to disguise more than temporarily the existence of plague; for, although a few such instances might occur, the question of the death-certificate would always bring to light a group of suspicious cases, and the necessary investigation would, with the assistance of the bacteriologist, soon determine the true nature of the disease.

The machinery of the sanitary administration of this country renders it impossible for an infectious disease of the fatal character of typical plague to exist here undetected for any length of time. It is not, however, sufficient to recognise the disease after several cases have been allowed to pass unnoticed, and hence, all our endeavours must be directed towards the detection and isolation of anomalous or irregular cases. We have for the purpose in this country the necessary local administration which is denied to India, China, and most other plague-infected countries.

A vital point at the present juncture in the campaign against plague is, therefore, the education of the medical profession in the recognition of the disease.

The following are a few particulars to which the medical officer who is examining a suspicious case should, in my opinion, direct his attention :

1. *Fever*.—The patient is feverish, complains of malaise, nausea, and headache, and has a quick pulse.

2. *Prostration*.—Prostration is well marked. If he is up, as would usually happen in the routine inspection of a ship's crew, he has difficulty in standing upright, his body rocks to and fro, and on being asked to walk he does so lurching in a drunken manner. The speech is frequently thick, and the face usually wears an anxious, or it may be an apathetic, expression. The patient may faint under the exertion of standing or walking. I have found these characters of prostration and peculiarity in gait of considerable value in the examination of native railway passengers when everyone in the train had to pass the medical examiner before being allowed to proceed further on his journey. Every native third-class passenger was compelled to leave his compartment, and was kept standing for some minutes during the examination of the whole carriage, a thing native plague-patients would have the greatest difficulty in accomplishing, though they would usually do their best to avoid any appearance of illness, to escape detention in the plague hospital.

3. *Examination of the Glands*.—The slightest tenderness on palpation of the inguinal, femoral, axillary or cervical regions, should be regarded with a certain amount of suspicion if accompanied by a rise in temperature, however small. On several occasions I have found cases with a temperature of a trifle over 99° associated with no symptoms other than a slight tenderness in the groin, which in a day or two turned out to be unmistakably bubonic plague.

In this disease the swelling of the glands is usually exquisitely tender. Occasionally a blister may be met with surmounting a bubo, and rarely the "carbuncle" form of plague may be seen. I recollect one case which commenced as a small pimple in the middle of the back, which pimple developed into a large ulcer with a black necrotic centre surrounded by a deep red fossa with indurated edges. The slough gradually separated, leaving a large deep ulcer, which ultimately granulated up. This case also had an axillary bubo.

4. *The Conjunctivæ*.—The conjunctivæ are usually injected, often in a very marked manner, and in my view some importance is to be attached to this appearance.

5. *The Tongue*.—The tongue is usually coated at first, with red edges. It becomes brownish later.

6. *Diarrhœa and Vomiting*.—These are frequently met with.

The above are the points most readily observable and most frequently met with in the bubonic form of plague. The diagnosis of the pneumonic form lies chiefly in the intense prostration, out of all proportion to the lung changes found on physical examination, and the presence of the *Bacillus pestis* in the sputum. The septicæmic form presents considerable diagnostic difficulty, except in the presence of a well-marked epidemic.

The Relation of the Clinician to the Bacteriologist.—The above points will usually suffice to lead us to a provisional diagnosis of plague, but the absolute diagnosis must usually rest upon the report of the bacteriologist, and this country is to be congratulated upon the facilities at its disposal in this respect. Although relying upon the bacteriologist for the ultimate diagnosis of the disease, the fact must not be lost sight of that it is the clinician upon whom the onus of the primary decision devolves. It is he who in the first instance recognises the suspicious nature of the disease, and deals with the case and its "contacts" in the necessary manner. It is only after an interval of at least three or four days that the bacteriologist is able to definitely state his diagnosis as a result of his investigation, by which time all preventive precautions have been taken. The bacteriologist, therefore, lends auxiliary and necessary aid towards a diagnosis, but the clinician bears the brunt of the work, and chief reliance must be laid upon him. Were the clinician to postpone action until the dictum of the bacteriologist had been procured, preventive medicine would lose much of its practical value.

A Point in the Inspection of Shipping.—There is one point in connection with the late Glasgow epidemic which seems worthy of remark. At the various ports in England which have connection with Glasgow by shipping, considerable attention was paid to vessels from that port. Without criticising this action, it is noteworthy that for one person that reached, say Liverpool, by sea from Glasgow, hundreds daily travelled by train subject to no supervision of any kind. From the practical point of view, train inspection would seem to be impossible in this country, but the position I have indicated seems illogical. The essence of inspection is that all travelling from an infected to a non-infected place should be inspected, and if the greater proportion escape examination, the good done by only partial inspection is very much discounted.

We must rely, under such circumstances, as the late Sir Richard Thorne has observed, upon the everyday sanitary administration of the country, and deal with imported infection by land or sea by the usual methods practised in this country with regard to other

serious infectious disease, namely, by notification, isolation, disinfection, aided by general cleanliness, using the term in its widest sense.

CONFERENCE ON TUBERCULOSIS.—Representatives of most of the sanitary authorities in the West Riding, Yorkshire, met in conference at Wakefield on November 16th to consider the best means of protecting the purity of the milk-supply in its relation to public health and of discussing the proposal to build, at the public expense, a sanatorium for the treatment of consumptives. The gathering was called partly on account of the unsatisfactory condition of the law relating to the inspection of cowsheds and dairies outside the county boroughs, and partly through a suggestion by the Medical Officer to the West Riding County Council that the different local authorities should combine in erecting and maintaining a public sanatorium. Dr. Kaye, Medical Officer of Health of the West Riding, submitted the following statistics as to mortality from phthisis during the past decade :

Year.	Number of Deaths from Phthisis.	Death-rate per Million living.	Quinquennial Averages.
1890	2,304	1,730	1,497
1891	2,134	1,620	
1892	2,039	1,477	
1893	2,069	1,492	
1894	1,788	1,275	
1895	1,966	1,392	1,311
1896	1,835	1,282	
1897	1,875	1,295	
1898	1,951	1,325	
1899	1,865	1,234	
	19,826 (Ten Years' Total)	1,409 (Average Rate)	—

He stated that there had been a considerable reduction in the mortality during the past year, which he attributed to increased activity under the Housing of the Working-Classes Act, 1890, and to more general adoption and enforcement of the Dairies, Cowsheds, and Milkshops Order.

The following resolutions were adopted by the Conference :

That this meeting of representatives of county authorities and districts agrees upon the necessity of more adequate administration for the eradication of tuberculosis in all forms, especially in relation to consumption in the human being and in the milk-supply.

That, in the absence of a general Act for the whole country, it is essential, in face of the large mortality in the Riding from such causes, that further powers should be conferred upon the authorities of the Riding.

That the authorities represented here do appoint a deputation to confer with the Local Government Board on the subject.

That in case the Local Government Board do not see their way to introduce in the coming session a Bill for the country at large or the West Riding, the legal advisers of the authorities represented at this Conference be requested to draft a Bill on the afore-mentioned subjects.

—*Yorkshire Post*.