PROTECT YOURSELF.

THE DANGERS OF CARELESS HANDLING OF PATHOLOGICAL SPECIMENS.

By John Hatcher

It is not the purpose of this article to exaggerate the dangers of handling pathological specimens, but rather to draw attention to the risks, remote it is true if due care is taken, but very real if proper and reasonable precautions are not a matter of routine. It is possible that now hospital Nursing Staffs are augmented by large numbers of only partly trained nurses that this matter is particularly important. These nurses have been very rapidly trained and it is quite unfair to expect them to be as conversant with the risks of infection as nurses enjoying the advantages of the orthodox training school. It should always be remembered that the strength of any team of people is the strength of the weakest link, so if one member is guilty of lack of care in specimen handling, all the other members of the staff are exposed to infection.

Sputum Specimens.

Sputum specimens obtained from consumptive patients are obviously particularly dangerous and great care must always be taken in their handling; the containers are in close contact with the patient for a considerable period of time and when he expectorates directly into them it is almost a certainty that the outside must become contaminated, in other words, has active tubercle bacilli on its surface. I always think it would be an excellent scheme if everybody who comes into contact with active pulmonary tuberculosis cases could have the opportunity of seeing a smear of sputum from such a case under the microscope, they would then vividly realise that these specimens frequently contain not a few, but large numbers of tubercle bacilli.

Blood Specimens.

In the ordinary course of events blood specimens are rarely dangerous in this country, the only common exceptions that are likely to matter are syphilis and enteric. When collecting blood from suspected cases of syphilis for the Wassermann reaction, care must be taken that any cuts or small wounds on the hands are covered; at certain stages of the disease the blood will contain the causative organism, the Spirocheta pallida. In the early stages of enteric, that is, the first ten days, there is a bacteriaemia, and large numbers of the infecting organism are present in the bloodstream. At this stage diagnosis is unlikely to be complete, and blood for culture and widal reaction will certainly be required; great care must be taken to avoid dropping any of the blood on the floor or contaminating the outside of the collecting vessel. The syringe and needle must, of course, afterwards be thoroughly boiled.

Fæcal Specimens.

One of the difficulties of fæcal specimen collection is transferring the specimen, or rather a small part of it, from the bed-pan to the collecting vessel. Particular care must be taken to avoid contaminating the outside of the collecting vessel, and the top must be properly fastened to prevent leakage. Should the vessel be inverted, this last is very necessary if the specimen is of a fluid nature. Incidentally, rarely is it necessary to send a large amount of fæcal matter for examination, a piece the size of a cherry is adequate for all examinations, except fæcal fat examinations, in which case the whole of the stool passed must be sent.

Urine Specimens.

It is probable that urinary specimens are more carelessly handled than any other type of specimen; this is probably due to the large numbers that have to be dealt with and to the fact that in general they rarely contain organisms of a frankly pathological nature. Unfortunately there are urinary specimens which can be extremely dangerous, for example, urinary tuberculosis and enteric cases, particularly is this true in the case of unsuspected "enteric carriers." Some years ago the writer had a startling demonstration of the need, for instance, of continual care in this matter. A cholecystitis case was ordered daily urine examinations, and these were carried out over a fairly long period of time, in company with all the other routine hospital urines, probably 30 or 40 specimens a day. Suddenly somebody discovered that some years previously the patient had suffered from paratyphoid fever, though at the history taking this had been denied by the patient. Bacteriological investigation of the next specimen proved the presence of B. paratyphosus. None of the laboratory staff contracted paratyphoid, and personally, I like to think that the routine measures always insisted on in the laboratory saved us from infection, particularly as this work is done by junior members of the staff.

While in this short article it has only been possible to touch on the handling of the specimens which are most frequently in request, the same principles apply to all. Lastly, it should never be forgotten that many of the specimens come from patients who are undiagnosed; in fact, laboratory investigation is often an essential part of the patient's investigation, so the patient may be suffering from one of a wide range of conditions, many of them highly infectious. All pathological material must be regarded as dangerous, no matter if it be a urine specimen from a senile patient or a sputum from a known case of pulmonary tuberculosis.

PLEA FOR MASS RADIOGRAPHY.

A plea for mass radiography for the population in the detection of symptomless pulmonary tuberculosis has been made by the National Association for the Prevention of Tuberculosis to the Stirlingshire Public Health Committee. Dr. E. Neil Reid, Medical Officer of Health, explained that a great many people could be suffering from pulmonary tuberculosis, and evidence could only be procured by X-ray examination. They had no symptoms or signs of the disease, and might feel themselves perfectly healthy. Therefore, they had no urge to call in a doctor. Even a doctor could not do very much without radiography.

A meeting is being held in Edinburgh to discuss this important matter.

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