

obtainable. The hypodermic syringe has almost superseded the exploring-needle as an instrument for diagnostic purposes, and, as is here seen, acts well in all cases where fluids are to be evacuated. I, myself, never think of using the old-fashioned grooved exploring-needle, but always prefer utilizing the greatly superior suction action of the hypodermic syringe, and have frequently employed the latter instrument in emptying small collections of fluid, such as are found in cysts and abscesses. In the case of suspected aneurism, the withdrawal of a few minims of blood with the hypodermic syringe will establish a certain diagnosis and enable the surgeon to act intelligently in the premises. It was first used in pericardial effusion, I believe, by Dr. F. P. Porcher.

ANTHRACÆMIA—WOOL SORTER'S DISEASE.

For several years past the attention of our professional friends in England has been attracted to a serious form of sickness prevailing to a considerable degree among operatives employed in woolen mills, the study of which has notably been made a point by Dr. Bell and gentlemen practising near Bradford. Some months ago a committee was appointed by the Medico-Chirurgical Society of that city to investigate the matter, and recently four typical cases have been reported, in which the result of post-mortem examination leaves no room seemingly for doubt as to the existence of this peculiar affection, and that in all probability it is due to blood-poisoning by the so-called *Bacillus anthracis*, a low form of bacteria, presumably contaminating the wool, and which gains entrance to the blood of those affected through the likeliest channels,—the lungs or stomach. Wool from which yarn of varying character is made, and which is used in whole or in part in the production of a long line of textile fabrics, is gathered from the ends of the earth, and when received is frequently very dirty, the Continental grades being especially impure. The ordinary method of sheep-washing previous to shearing is more of a habit than a success, and consequently, before the process of manufacture into yarn, wool has to be thoroughly scoured after reception at the mills, either by hand or by machinery. The impurities found in the fleece consist largely of earthy or vegetable matter, depending on the nature of the pasturage and shelter of the flock; but there is also at times animal matter,—the "tick," for example—with scales or scabs from the epidermis of the sheep, together with more or less oily material. Diseased sheep or goats may be rejected as unfit for food, but the wool or hair is all the same secured for market. Now, before scouring, the wool is "sorted" into long or short fibre, fine or coarse, etc., quality of stock determining large-

ly the ultimate product. This is done by hand in well lighted rooms, which are kept at a high temperature, especially in the cooler months, and it is here that the majority of cases of anthracæmia originate; but some have happened in operatives exposed only in departments after the material has been scoured, in which condition it is usually clean and white. A much better method is being tried, by which before sorting, the wool is treated with benzine, which not only cleans it of dirt, but also must destroy all bacteria. The caution requisite in this process, and the high insurance, unfortunately operate against the plan, but time and necessity will doubtless remedy these disadvantages.

The symptoms so far recognized are violent cephalalgia, often unilateral, fever intensifying in its progress, severe pleuritic pain, crepitan inspiratory rales, and finally free diarrhœa. The differential diagnosis between anthracæmia and typhoid fever is clear, and ordinary care only is requisite to distinguish them. Cases have been complicated with malignant pustule from inoculation by scratching pimples or abrasions, especially about the face, and in such instances the neighboring lymphatics have become greatly enlarged. The prognosis is bad, and treatment is, as yet, apparently unsettled.

Post-mortem investigation shows softening of the bronchial glands, and large accumulation of fluid in the pleural cavity particularly, but also in the abdominal. The intestines, beyond injection and low inflammatory signs, give no evidence. The glands of Peyer are not softened or ulcerated. *Bacillus* is abundant in the fluids of the closed cavities, in the viscera, and in the blood. Inoculation of blood containing this form of bacteria in the lower animals, as tested in the mouse, rabbit, and guinea-pig, produces the disease, death supervening in from thirty-six to seventy-two hours. Decomposition is rapid, especially at the site of puncture in the case of inoculation.

My attention was called to this subject from having during the summer, treated two obscure cases of illness in wool-sorters, resembling very much the affection described, and which, though they recovered, induce me to refer to them with a view to further investigation by gentlemen of the Society who may have an interest in the subject. Their sickness was precisely as above described. The period of incubation, so far as known, was about ten days, the acute duration two weeks, and as much more time for convalescence was required. The treatment was expectant,—large doses of cinchonidia sulphate for the bronchial disorder; opium and carbolic acid for the diarrhœa; tincture of iodine painted externally for the pleuritic pain. There was no tendency to a relapse. Another patient (a driver), who handled bales of wool continually, succumbed after leaving my care from what was certified as phthisis, but which very