Clinical Lecture
ON A
CASE OF ACUTE TUBERCULAR DISEASE, WITH OCCLUSION OF THE VAGINA.

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ELIZA W——, aged fifteen, was admitted under my care on the 26th of April, 1872. Her father and mother are alive and healthy, and there is no history of consumption in the family. The patient herself had always enjoyed good health until about six months ago, when she experienced acute pain in the head, recurring from time to time. For the last three weeks her fellow-servants had noticed that she was stupid and dull; previously she had been an intelligent and bright girl. On the 22nd of April she complained of severe headache, pains in the back and loins, sickness, and constipation. For some indefinite period she had been subject to a slight harsh cough. She had never menstruated. On admission, the tongue was foully coated; complexion purplish; expression dull; no cough; no dyspnœa; anorexia, but no thirst; complains chiefly of headache, nausea, and pains across the loins, in knees, and under right axilla; a few large pustular spots on the trunk; nothing of any moment discovered on examination of the chest. Ordered an effervescing draught, with spirit of chloroform, every six hours, and a warm bath.—Evening: Pulse 96, respiration 18, temperature 99°.

April 27th.—After a sleepless but not delirious night, the patient seems drowsy this morning. When moved and examined by percussion and auscultation she is fretful, and apparently hyperæsthetic; pupils dilated; no headache; tongue densely coated orange and white. No urine passed since admission. Twenty-five ounces withdrawn by catheter; specific gravity 1015; contains no albumen. Morning pulse 96; temperature 98·9°. Ordered, two grains of calomel at once, and in three hours a draught of castor oil. Twenty grains of bromide and two grains of iodide of potassium added to each dose of the effervescing mixture. Hydrate of chloral, fifteen grains, administered at night.

28th.—Slept well after the chloral, but tosses her limbs about this morning, seems stupid and heavy, and scarcely answers questions at all. Temperature 98·4°; pulse 102, unequal in force and rhythm. Ordered dry cupping to the nape of the neck, and a castor-oil enema.

29th.—Lies in a semi-comatose condition. Jactitation continues. Urine, after retention for twenty-four hours, withdrawn by catheter: specific gravity 1025; reaction acid; contains a trace of albumen. Motions after castor oil abundant, and extremely offensive. The head to be shaved, and compound camphor liniment, with the addition of half its volume of strong solution of ammonia, to be applied to the scalp; enemata of strong beef-tea—three fluid ounces with an egg—to be administered every four hours.—3.30 P.M.: Patient grinds her teeth; complexion intensely livid.—Evening: Pulse 138; temperature 99·6°.

30th.—Complete unconsciousness; extreme lividity. Pulse 146; respiration 54; temperature 101·8°. Died at 3 P.M.

Autopsy, twenty four hours after death.—The following is an abridgment of Dr. Robert King's report:—Body well nourished. Both lungs, as well as their pleural membranes, were thickly studded with grey miliary granulations. There were also numerous subpleural ecchymoses. In both lungs were small patches of extravasation, and a few islets of lobular pneumonia in an early stage. The right lung was gorged with black blood; the left was almost equally congested, but with blood of a brighter red. The under surface of the diaphragm and the capsule of the liver were copiously beset with miliary granulations. The liver itself contained a number of cheesy bile-stained bodies, a little less than a split-pea; these were found to consist of bile-ducts, nearly if not entirely obliterated by deposits within and around their walls. Granulations were found abundantly in the spleen and the kidneys, and in both organs they had partially undergone the cheesy metamorphosis. There was no ulceration of the intestines; but specks of tubercle were discovered on some portions of the peritoneal surface, especially on that forming the recto-uterine fold. The uterus and ovaries appeared to be healthy; but around the os uteri was a little patch which seemed to be roughened by miliary granulations. The vagina formed a huge sac, measuring eight inches in circumference, and containing some twenty-five or thirty fluid ounces of dark, grumous, offensive material, which escaped in abundance on cutting through the thick, tough, and imperforate hymen. Grey granulations were met with at the base of the brain, in the fissure of Sylvius, and on the upper surface of the cerebellum. The brain-tissue was extremely soft, and the lateral ventricles were distended with fluid and greatly dilated.

Commentary.—Gentlemen, at the onset we had the greatest difficulty in ascertaining the previous history of the case. The facts had to be gathered piecemeal from various sources. When gathered they were meagre in the extreme, and we were left in great measure to our own resources. There were many features of hysteria about the case, but a moment's reflection sufficed to dispel that idea. The tongue alone, densely and foully coated as it was, gave positive evidence strongly in favour of more serious mischief, while the absence of all quivering of the eyelids bore witness to the non-existence of hysteria. Indeed, I should rate the negative evidence as even stronger than the positive; for in my experience, amidst all the fleeting phases of that wonderful malady, this quivering of the eyelids is almost invariable. We were, then, compelled to look for some other way of accounting for phenomena which, apart from hysteria, were in the highest degree alarming. With some misgiving and some mental reservation, I wrote down the diagnosis of tubercular meningitis. When, however, I learnt that there was a history of severe and recurring headache six months ago, I began to waver in my decision. It seemed natural to connect that headache with the existing disease; and if there were grounds for assuming this connexion, it appeared impossible to retain the original diagnosis, for tubercular meningitis would assuredly have done its work and taken the life of the patient long before six months were over. I wavered then for a while, and bethought myself of abscess or tumour in the brain, but I never erased the written words from the card, and the last thirty-six hours of the girl's life proved conclusively to my mind that the old diagnosis was the true one. The girl, during the whole period of her residence in the ward, had been remarkable for the purple flush of her complexion. Now, however, she became intensely livid, and even cyanotic. You are aware that death by apnœa and death by coma are formally distinguished from each other, and they are truly distinguishable at their origin, but at their close they present many phenomena in common, and in the dead-house the appearances in the lungs are much the same. It might, therefore, have been argued with some show of reason that the intense lividity of the girl betokened nothing more than coma assuming naturally the characters of apnœa at its close. The argument would have been untenable. The lividity had existed at the onset long before the coma began, and in the end it was intensified in a degree, and for a period of duration, utterly inexplicable on the hypothesis of coma alone. There must inevitably have been all along intrinsic disease of the lungs quite independent of any pathological process going on within the cranium, and such intrinsic disease by exclusion must have been tubercular. I say by exclusion for this reason: if the lungs on examination tell you nothing at all, or nothing of any special significance, and yet, on general grounds, you are assured of the presence of lung disease, then you may be equally sure that the lung disease is tubercular, and under the same circumstances you may reasonably surmise that the tubercle is widely disseminated, not in the lung-tissue only, but elsewhere throughout the several organs which it usually invades. Amongst these organs the membranes of the brain, in particular the pia mater, occupy a pre-eminent place. Tubercular meningitis, then, was about as safe a diagnosis as any fallible man could make. The old headache was, in all probability, connected with the arrest of the catamenia, of which I shall presently speak, and stood in no direct relation to the existing symptoms.

If you remind me that there was no history of consump-

tion in the family, I reply that such a history, to the best of my belief, has little or nothing to do with the far-spreading development of miliary tubercle. If, again, you tell me there was no acceleration of pulse or breathing, at least before the closing scene, no cough, no dyspnœa, properly so called, no elevation of temperature, I reply that, strange as it may seem, you *may* have none of these things in tubercular meningitis. With regard to cough and dyspnœa, as the mere diffusion of pulmonary tubercle cannot be discovered by physical examination, so it fails to betray itself outwardly by any violent or explosive act; and in truth it is one of the best-marked features of tubercular meningitis that the chest-symptoms go to sleep as it were, while the brain is unnaturally awake. With regard to the pulse I have known at least two cases of acute and universal tubercular disease where the pulse never exceeded 96 from first to last, so long as they were under my observation. Similar remarks apply to the respiration. Understand me rightly, however. I am not going to deny that before the accession of brain symptoms both the pulse and the respiration may have been, and probably were, above the normal average. Finally, with regard to temperature I have been enabled to diagnose tubercular meningitis in a difficult case on the simple ground of a temperature never exceeding 99°. Again understand me rightly. I am not affirming the absence of well-developed fever heat as the rule; far from it. I only say that fever heat may be absent in some cases towards the close, and even during the whole period of medical supervision.

So much for the aspect of the case during life. Let us now pass in review the two most remarkable features in the discoveries of the dead-house: the wide-spread dissemination of tubercle, and the arrest and imprisonment of the catamenia within the sac of the vagina, for sac it may be called with propriety when its orifice was closed by an imperforate hymen, and its walls presented a circumference of eight inches.

Gentlemen, I need not inform you that modern researches have gone far to set aside the old doctrine so long prevalent as to the origination of tubercle, and have established the general, if not universal, law that tubercle, at least in the disseminated form, is not a neoplasm or primary growth, the result of a peculiar dyscrasia, but a secondary deposit, the offspring of an infective process. The aboriginal source of that infection is said to be for the most part some material which has undergone the caseous degeneration. Analogous deposits in the form of secondary abscesses occur, as you know, in pyæmia. Now, assuming the truth of the aforesaid law, how are we to account for the acute development of tubercle in our case? On careful examination we found nothing whatever to explain it, save only the collection of decomposing catamenial blood in the vagina. Blood of course contains white corpuscles, and white blood-corpuscles are held by many to be chiefly, if not exclusively, the progenitors of pus-globules. Blood, then, in its retrograde metamorphosis, may be supposed to go through a process akin to suppuration, and on this view no one would have been surprised if we had discovered in our case the evidences of pyæmia. Again, there is but one step between suppuration and caseation; and, indeed, the essentials of the change in question may have actually existed in this girl, although, of course, the appropriate form and consistence were wanting; for condensation was impossible with a fresh flow of blood recurring at each catamenial period. On this view there is nothing unnatural or astonishing in the discovery of tubercle, which, in the absence of all other conceivable sources, may, with extreme probability, be ascribed to the decomposing blood-mass in the vagina. Perhaps, however, I have been refining too much and drawing unnecessary distinctions. It may be that sometimes the same foci of infection give rise to pyæmia and tubercle indifferently, the particular product developed varying with the constitution and surroundings of the patient. Nay, more, it is not beyond the limits of a fair presumption that both processes may occur at the same time in the same individual, and in our own case it might not be going too far to designate as products of something like pyæmia the pustular scabs on the trunk and the ecchymoses beneath the pleura. There is an obvious reason why the two processes should not *often* be found co-existing in the same person; pyæmia will, for the most part, kill before tubercle has time to grow.

I conclude, therefore, in favour of the disintegrating blood as the fountain-head of the mischief, and this conclusion is positively and strikingly confirmed by the multitude of miliary granulations clustered around the os uteri, and scattered throughout the recto-uterine fold of the peritoneum. If I am right, the case is almost unique, for I cannot recollect having heard or read of tubercle originating in the decomposition of blood.