

mences most frequently in the cancellous tissue on the shaft-side of the epiphysis, though it is only too well known that it may reach both the medulla and the periosteum in a remarkably short space of time. The progress of the disease, after reaching the medulla proper and the periosteum, is rapid, and within a week, if the patient survive so long, the whole medulla may be full of pus, and the periosteum may be raised by pus throughout the whole length of the bone between the two epiphyseal cartilages. Too often, however, before this extent of local disease is reached, the patient has succumbed to septic poisoning, inflammation of the serous membranes, or other pyæmic manifestations.

(To be continued.)

HÆMATURIA.*

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When baffled in tracing the origin of pathological phenomena, the temptation to hide the imperfections of a much-loved science is at times too powerful for its votaries; a garb meagre and out at elbows is obscured from the public gaze by a coat of tinsel, and medical vocabulary is amplified by the coining of another euphonious word. The ceremony of christening is orthodox enough in its way; but, like Tristram Shandy, unfortunate even *ab initio*, the child may be doomed to pass through the natural period of its existence bearing a name much corrupted in the giving, and therefore sadly misleading; the symptom is accorded a position of too exalted dignity, and in the course of constant usage comes to be looked upon as the disease itself, with the inevitable consequence of hazardous treatment. In such a class of symptoms hæmaturia occupies a leaning position not only on account of its importance, so far as the interests of the patient are concerned, but also owing to the multitude of subjects opened up by an investigation of the matter. Indeed, a full and intelligent discussion of its many ramifications would fill a volume; and had I the requisite ability it would be quite impossible in the length of an ordinary paper, to do more than touch upon each. Endeavoring to do so as briefly as possible, less attention will be given to the theoretical than to

those features which appear to be of most practical utility. Therefore, as a sign of diseased conditions, which it is, and nothing more, its relations of cause and effect, together with a passing reference to some remedial agents, will be the limit.

At the outset the line of distinction may wisely be drawn between it and hæmatinuria, which, in many features, it so closely simulates, and with which, as to origin, it is occasionally identical.

The difference between the two conditions is broadly stated in the fact that the red corpuscles are apparent in the former, while in the latter the coloring matter is present, those bodies having been broken down and only a detritus remaining.

It is obvious that escape of blood into any part of the urinary passages may be produced by—1st—Depraved conditions of the blood-current, the structures themselves being intact. 2nd.—Congestion, active or passive, of any portion of that tract, such as may occur in the early stage of Bright's disease. 3rd.—Solution of continuity either from external injury or internal concretions and parasites; and 4th—by the unhealthy vascular condition of, or irritation arising from, neoplasms.

Other exciting causes being equal, the more marked the dyscrasia, the more likely the corpuscles are to undergo disintegration either before or during extravasation; therefore, if by any influence the vital force is lowered, a true hæmaturia may be transformed into hæmatinuria.

For example, a blow on the back, which ordinarily would excite renal hæmorrhage, might, if the system is saturated with malaria, be followed by hæmatinuria.

Red corpuscles break down more rapidly than the white, especially in alkaline urine; consequently hæmorrhage is not always discoverable microscopically, if the secreting function of the bladder is sufficiently abnormal to favor alkalinity, particularly so if the blood has escaped slowly and been retained for any length of time in that viscus. Chronic poisoning by arsenic, phosphorus and iodine, and the depraved habits of body engendered by scurvy, pyæmia, septicæmia, yellow fever and notably malaria in its malignant form, may be mentioned as the most frequent causes of hæmatinuria. This as a complication of intermittent fever is rare, excepting in tropical climates, although I can recall two cases of this character.

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