

haematuria. Diagnosis depends on finding the ova in the urine.

The *Filaria Sanguinis Hominis* may cause haematuria alone, but very frequently the blood is associated with chyle and the urine has an opaque milky appearance, with a pinkish sediment containing blood clot. This condition of the urine is intermittent, the patient often passing perfectly clear urine for long periods of time. Some times the bladder contains numerous clots which are difficult to pass. Diagnosis depends upon discovery of the embryo in the blood or urine.

III.—HAEMATURIA OF URETHRAL ORIGIN.—The causes of haemorrhage from the urethra are traumatism instrumentation, new growths as polypi and papillomata, impacted calculus. The amount of bleeding from any of the above is slight except from the traumatism when it may be quite severe. The source of the blood is easily made out, as the first part of the urine passed contains blood, while the latter part is comparatively clear or free of it. An examination by the urethroscope will locate the source of the bleeding except in the posterior part of the urethra.

IV.—VESICAL ORIGIN.—Haematuria of vesical origin is usually an indication of more serious trouble than that of urethral origin, and as a healthy bladder is so necessary for the comfort of the individual, it is very important to ascertain the cause of a symptom like haematuria. The causes are rupture of the bladder, tumours, simple and malignant, calculi, tuberculosis, simple ulceration, varicose condition of the veins, parasitic infection.

In rupture of the bladder haematuria will always be present, but the amount of blood or blood stained urine is not an indication of the seriousness of the injury. A very small quantity of such

urine may be obtained by the catheter due to its extravasation through the tear. The history of an injury in the bladder region will help clear up the diagnosis.

In tumours of the bladder haematuria is a very prominent symptom in some cases. Papilloma and carcinoma are the most common growths, and the haemorrhage from either is very erratic. It may be slight or so profuse as to cause clotting in the bladder with retention of urine, due to obstruction by the clot. The bleeding from these tumours is intermittent, extends over a long period of time and is not much influenced by physical exercise.

Diagnosis of these growths can easily be made out by the cystoscope after the bladder is emptied of blood-stained urine. An examination of the urine for bits of tissue cast off from these tumours, or of foreign cells, along with the relation with which the blood and urine are passed, will in many cases indicate the nature and source of the trouble.

There is nothing special of the haematuria of tuberculosis of the bladder. It is intermittent, and usually microscopic in quantity. Tubercle bacilli found in the urine or in shreds of cast off tissue, pyuria, painful micturition are accompanying symptoms which clear up the diagnosis.

Fenwick states that simple ulceration of the bladder is not an infrequent occurrence and may be cause of haematuria. It is situated near the trigone or neck of the bladder.

In vesical calculus haematuria is not a marked symptom. Blood in microscopic quantities is present and any severe exercise as jumping, jolting, horseback riding, etc., may increase it, so as to make its presence apparent by the colour of the urine. The cause of the haematuria can in many