made a satisfactory recovery. He was cautioned of his danger, especially of apoplexy, on account of the high arterial tension and diseased vessel-walls, but he was too busy to heed advice.

On the night of November 6th, fairly free hæmoptysis occurred, probably a pint of blood being coughed up. At five in the morning the pulse was 90, strong and full, respiration about 22, temp. normal, and continued so. He was ordered magnesia sulphate, one drachm, in a small quantity of water, hourly, until the bowels were moved freely; and nitro-glycerine, $\frac{1}{50}$ grain, every three hours, to relax the pulse. By evening, two free alvine evacuations had occurred, but the pulse was little altered. Nitro-glycerine, $\frac{1}{75}$ grain, was continued, the result being carefully watched, and the saline given three times a day and calomel at night, to keep bowels open. Next day the pulse was softer, the urine fairly abundant, sp. gr. 1018; no albumen; pale. Hemorrhages in lessening quantities recurred for three days; cough was not troublesome. Careful examination of the lungs revealed no evidence of disease except, perhaps, slight hyper-resonance on each side of the sternum. The chief trouble after this was in overcoming the opium habit; he was kept in bed for a couple of weeks, with daily massage and good personal care. He improved satisfactorily, the craving for opium soon ceasing, but he was kept in his room for nearly two months. The magnes. sulph. was replaced by Hunyadi mineral water, and later by Carlsbad salt, as being a better diuretic. His health has been excellent since.

In this case the cause of the hæmoptysis is certainly not included in Williams' list of causes already quoted; it resembles closely those described by Sir Andrew Clark, and was probably due to the same cause. In the treatment of these cases, Clark is very emphatic in the assertion that the hemorrhage is aggravated, or at least maintained, by the methods usually followed in hæmoptysis, by the frequent administration of large doses of the strong astringents, of ergot, the application of ice to the chest, and by the free indulgence in liquids, to allay the thirst which the astringents create. For my own part, it is at most only in exceptional cases that I have seen unmistakable benefit result from such treatment in hæmoptysis of any kind; at present, I cannot recall such a case. Fortunately, Clark's paper came to hand while the case given was in progress, and I was gratified to find myself carrying out a general plan of treatment in close accord with that recommended by so eminent a practitioner.

The indication for treatment seemed to be to secure elimination from the blood of waste products which the hard pulse and scanty urine showed were in excess in that fluid, and, in all probability, were largely, if not wholly, the immediate etiological factor in the production of the hemorrhage. It was with this object in view that the sulphate of magnesia was given to act freely on the intestinal tract; and nitro-glycerine to relax the arterial tension and prevent rupture of a vessel in some other organ, also to promote excretion by the kidneys. That the sulphate of magnesia has great influence in arresting bleeding in many cases of hæmoptysis, I have seen undoubted evidence in a goodly number of cases. In one case, a gentleman in the drug trade, who has been the subject of repeated hemorrhages for the last fifteen years, due to some undiscoverable cause, though probably phthisical, the attacks of bleeding are nearly always preceded by a feeling of general fulness. On my advice, as soon as this feeling is perceived, the amount of liquid taken is reduced to a minimum, and one-half drachm doses of the sulphate are taken in one or two drachms of water every hour until a free evacuation is obtained. The feeling of fulness then passes off and no hemorrhage occurs; but if the sulphate is neglected, the bleeding always follows.

NOTES ON A CASE OF PAROXYSMAL HÆMATURIA.

BY DR. SAUNDERS, OF KINGSTON.

Read before the Ontario Medical Association.

I have preferred to use the above name rather than the more generally accepted ones of hæmatinuria or hæmoglobinuria, because there may be a doubt in the case I am about to relate; whether it was not one of true discharge of blood through the kidneys, although repeated microscopic examinations failed to detect the presence in the urine of blood corpuscles, and the marked icteric tint would seem to indicate that free hæmoglobin was present in