

Original Articles.

A CASE OF SEVERE AND THREATENING HEMATURIA FROM MOVABLE KIDNEY, WITH A DISCUSSION OF THE CAUSATION OF THIS CONDITION.¹

BY ARTHUR T. CABOT, A.M., M.D., BOSTON,

Surgeon to the Massachusetts General Hospital.

It is not uncommon to see blood in the urine as a result of mobility of the kidney, but this blood is usually present in microscopical amount, rarely in such quantity as to give the urine a characteristic color.

A case in which the loss of blood from this cause reaches proportions to induce serious anemia is a great rarity, and it is on this account that the following case is reported:

Miss H., a spare woman of 43, was seen by the writer on April 6, 1901, in consultation with Dr. G. C. Howard. The patient remembered that in the past few years she had at times when tired noticed a dull pain in the abdomen. This was felt, she thinks, rather to the left of the median line. She had also during this period on several occasions seen a little blood in the urine. This condition was not persistent. The urine would be colored at one urination and the next time would be again clear. In December, 1900, she had hematuria lasting for two days. The urine during this attack was deeply colored, but did not contain clots. The urine was then clear to her observation until March 18, 1901, when the hematuria began again with considerable violence. The urine at first was bright red, but after the first few days became dark purple, almost black. It now also began to contain clots.

The patient was put in bed, and ergot and other hemostatics were administered, but the hemorrhage continued in unabating amount. An examination of the urine on April 6, 1901, showed a specific gravity of 1.012 and an alkaline reaction, between $\frac{1}{2}$ and $\frac{1}{4}$ of albumin and a large sediment of normal blood, mucus and pus. At no time during this attack was there evidence of inflammation or much irritation in the bladder. The urine was passed about once in four hours in the day and about three times at night. The only discomfort experienced was during the passage of clots. Beside these local symptoms there had been a decided loss of appetite and the power to take food, while the strength had been steadily failing.

When I saw the patient on April 8 she was extremely pale and waxy in appearance, with a rapid, feeble pulse. She was propped up in a half-sitting position in bed. A bimanual examination of the pelvis was negative. The bladder was carefully searched with a steel instrument, and between this searcher in the bladder and the finger in the vagina the posterior and lateral bladder walls were closely examined without the detection of any projecting vesical growth or, indeed, of any thickening of the bladder wall. This very thorough exploration caused no increase of the hemorrhage, nor did it change the urine by any brighter appearance of blood. The abdomen was thin, with no great rigidity of the wall, and at once the right kidney was felt, somewhat enlarged and in an abnormally low position. The lower pole of the organ reached to just above the brim of the pelvis and the upper pole was still covered by the edge of the liver and the ribs. The kidney was not very sensitive to pressure, although firm handling caused slight discomfort. It was not possible with moderate force to push the kidney up into place, and a persistent effort to accomplish this

was not thought advisable lest some venous thrombus should be dislodged by such manœuvre.

In the absence of evidence pointing to any other explanation of the hematuria, it was believed to be due to the extreme congestion of the right kidney, caused by its downward displacement. It was further recognized that the patient's position in bed, half sitting and bending forward, favored the downward displacement and so tended to aggravate the congestion. It was further felt that the patient's extremely reduced condition was unfavorable for operation.

It was decided, for these reasons, to lower the patient's shoulders and to raise her hips so that the downward drag of the kidney should cease. If this measure failed, it was felt that an operation would have to be done as a final resort, in spite of the unpropitious condition of the patient. On the other hand, it was felt that if this change of position worked favorably and the loss of blood was stopped, that then the operation for fixation of the kidney could be done after the strength had been regained.

The patient was now laid flat upon the mattress and the foot of the bed was considerably raised. Dr. Howard subsequently wrote me that for thirty-six hours after I saw her there seemed to be rather more blood in the urine than before. At the end of forty-eight hours it showed a sensible diminution of blood, and a few hours later was wholly free from any red color. A considerable quantity of what appeared to be broken-down tissue had been noticed in the urine just before the hemorrhage ceased, and for two days thereafter the urine contained this fleshy material and much mucus. (Unfortunately, this material was accidentally thrown away without any microscopical examination. It seems probable, however, that it was decolorized blood clot mixed with mucus that had accumulated in the renal pelvis and escaped when the free flow through the ureter was re-established.) The urine then became quite clear with acid reaction. Specific gravity, 1.016, and a slight trace of albumin. Three days later Dr. Howard allowed the bed to be lowered to a horizontal position for about four hours. On the following morning the blood had reappeared in the urine. From this time the position with raised feet and lowered head was maintained until early in May, when the patient, becoming very tired of the position, was allowed to sit bolstered up in bed for twenty minutes each day. The blood became at once noticeable in the urine, though in far less amount than before. From the time the bleeding ceased the patient began to rapidly gain strength and the appetite and digestion became satisfactory.

Finally, the patient became convinced that an operation for fixation of the kidney was necessary to enable her to get up with safety.

May 20, 1901, I saw her again at the Lawrence Hospital, which she entered for the operation. Under ether the kidney could be plainly felt projecting from beneath the ribs and reaching down to the level of the umbilicus. It was very much smaller than at my former examination, being now little, if at all, larger than normal, and it could now be pushed quite easily into its proper position. An incision was made down along the outer edge of the quadratus lumborum muscle, exposing the kidney. The fat capsule was ample in size and scantily filled with fat. In it the kidney moved up and down freely. The surface of the kidney was of a milky color, owing to a very considerable thickening of the capsule proper. No further abnormality could be discovered. The thickened capsule was split along the convexity and slightly separated from the kidney. Its edges were then sewn tightly to the transversalis fascia with continuous stitches of

¹ Read before the Clinical Meeting of the Massachusetts General Hospital Feb. 14, 1902.

chromicized catgut. The upper ends of these stitches were fixed in the fascia on the lower edge of the twelfth rib. The muscular layers were brought together with interrupted catgut stitches and the skin tightly closed with silkworm gut. Convalescence was uneventful. In a letter received from this patient on Feb. 4, 1902, she says: "I have not had any appearance of blood in the urine since the operation. I do not have any pain in the kidneys," but "have a dragging in the one that was operated on when I lie on my left side."

The condition in this case admits of no doubt. The position of the kidney at the first examination, the cessation of the hemorrhage after a favorable change of position, the renewed tendency to hemorrhage whenever a faulty position was resumed, and the final entire relief when the kidney was securely fastened in correct position, force one to believe that this was indeed a case of serious interference with the renal circulation due to the downward displacement of the kidney.

Many of the shorter treatises on this subject are wholly silent as to the occurrence of serious congestion from this cause, and even the more extensive monographs on the subject of movable kidney make very brief mention of the possibility of congestion being due to the interference with the vessels. Furthermore, when they mention it, they attribute this congestion to a twisting of the vessels; but the present writer has yet to see the report of such a case in which it is made clear that any real twisting occurred.

The fact is, that little is known of the mechanism by which the circulation is obstructed in cases of movable kidney. It is a condition which does not lead to death, and during life the exact nature of the obstruction cannot be accurately studied. It is probable that it rarely depends upon real torsion of the vessels. Rotation of the kidney is an extremely infrequent condition. I have seen it but once, and that in a case where an attempt had already been made to fix the kidney. The lower pole of the kidney had been fixed and the torsion was caused by the falling downwards and forwards of the upper pole. In the vast majority of cases of movable kidney, the displacement is simply a slipping downward of the whole organ. When the downward drag begins to be really felt, it appears natural that it should produce more obstructive effect on the thin-walled vein, with its comparatively sluggish current, than on the thicker artery, with its vigorous flow. The anatomical arrangement, too, of the vessels in the right kidney is especially favorable to the production of congestion when the kidney slips downward, for on that side the vein is short, while the artery is long, coming from the aorta on the other side of the spine. Owing to this shortness of the vein, it feels the pull of the kidney, as it moves downward, before the longer artery does and in greater degree. Thus the return of the venous blood is interfered with before the arterial supply is materially affected, and the conditions are most favorable to a condition of active congestion. It would be interesting, in this connection, to have reports of any cases of pro-

nounced congestion of the left kidney due to displacement. In the only case that the writer can recall of a left kidney that was noticeably enlarged in consequence of displacement, it was believed that this enlargement was due rather to an intermittent hydronephrosis than to any especial congestion of the organ, and that belief was borne out by the immediate relief afforded by massage and replacement of the kidney in its proper position. In that case there was no appearance of blood in the urine to support the theory of any congestion.

Examination of literature on the subject confirms the impression that hemorrhage from this cause is a very rare condition. Rovsing² reports a case of hemorrhage in a woman which appeared after lifting a heavy tub. Colon bacilli were found in the urine, and it was shown by examination that the bleeding was from the right ureter. The kidney was enlarged, rigid and attached closely to the liver. The liver also showed a furrow which was believed to be due to tight lacing. Rovsing considered the bleeding in this case due to venous stasis by torsion of the pedicle in a misplaced kidney. The operation effected a cure.

In a rather hasty review of the literature on the subject, this is the only case which I have been able to find where the description of the condition is exact enough to convince one that it is really a hemorrhage due to a misplacement. The various textbooks on medicine and surgery are silent in regard to the occurrence of this condition. Morris, in his recent very complete consideration of the diseases of the kidney, mentions casually that the blood shows itself very rarely in this condition, but makes no allusion to the possibility of so serious a congestion as is illustrated in the case just reported.

I have met with a number of cases of swollen and tender kidney in which the downward drag of the organ was the evident cause of the swelling. It is always difficult in such cases to accurately determine how far the swelling is due to congestion and how far it depends on an intermittent or temporary hydronephrosis caused by a kinking of the ureter. But the more I have seen these cases, the more clear I have been that congestion plays a large part in the production of the swelling.

It is plain that a kidney with short vessels would be quick to feel the effect of a downward pull, and in a kidney lying unusually high, it is conceivable that this pull might produce considerable obstruction to circulation before the organ came down low enough to be regarded as a movable kidney. Cases of hematuria are occasionally reported in which no cause can be discovered, and in which cutting down upon the kidney and splitting the capsule effects a cure. I have seen one or two such cases. May not some of them be instances of congestion from the downward drag which has not been recognized, but which has been corrected by the adhesions following the incision into the kidney?

* See British Medical Journal, Nov. 19, 1898.

This matter needs further study, and, unfortunately, the cases are too rare to allow any one observer to have the opportunity to make an extensive study of them. It behoves, then, those seeing such cases to report them fully.

REPORT OF TWO CASES OPERATED ON FOR DEFORMITY OF THE NOSE.¹

BY J. PAYSON CLARK, M.D., BOSTON.

THE first case which I shall report is interesting, more perhaps as a curiosity than because it illustrates any particular class of cases. The patient, Mr. P., was referred to me last April by Dr. F. W. Thompson of Fitchburg for the correction of a nasal deformity. He was an electric car conductor, 31 years of age. The deformity



FIG. 1.—Case I (before operation).

followed an injury caused by a fall on the nose when he was a boy. The appearance of his nose was such as to be very noticeable. This condition was especially trying to him, as his occupation made it necessary for him to be seen by a great many people every day, and exposed him to the insulting remarks of thoughtless boys. This sketch (Fig. 1) gives a very correct idea of his appearance before the operation. It was drawn by Dr. H. P. Mosher (to whom I here desire to express my thanks) from a photograph taken by him at the time, but which, owing to the darkness of the day, did not come out satisfactorily. The plaster cast also shows the shape and appearance of the nose. On examination

¹ Read before the Surgical Section of the Suffolk District Medical Society, Dec. 4, 1901.

this appearance was found to be due to an overgrowth forward of the triangular cartilage of the septum, drawing up the tip of the nose and giving an irregular knob-like appearance to the organ. This appearance was accentuated by rather a low bridge, and the irregularity was increased by a bending of the redundant cartilage on itself to the right. Internally the septum was deviated to the left, but not enough to be obstructive.

The operation was a comparatively simple one. The patient was etherized and placed sitting up in a chair. The nasal vestibule was thoroughly washed with Seiler's solution. The nasal mucous membrane in the left nostril close to the septum and below the deformity was cut through with a small bistoury, and, by means of a blunt dissector introduced through this opening, the skin was freed over the prominent portion of the nose. Then a pair of slightly curved scissors were introduced and the redundant cartilage removed piecemeal until the shape of the nose seemed about as it should be. A gauze wick was placed in the

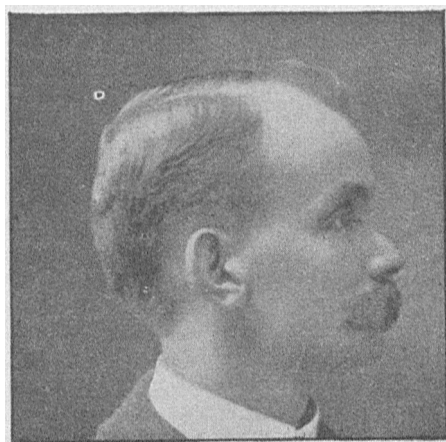


FIG. 2.—Case I (after operation).

left nostril and a gauze pad with cardboard and adhesive plaster over the nose to hold everything in good position. There was a certain amount of swelling which gradually disappeared. The gauze wick and external support were removed on the second day and the patient made an uneventful recovery. As you can see by the plaster cast and photograph, taken, one over a month and the latter several months after the operation, the opening of the nostrils is now on a horizontal plane and the general appearance of the nose is not remarkable in any way (Fig. 2).

My second case shows some of the difficulties which one may encounter in attempting to correct old displacements or fractures of the nasal bones. The patient, Miss A., aged 25, came to the Massachusetts General Hospital last September in Dr. Mixer's service. Knowing that I was interested in such cases he kindly referred her to me. The history is briefly as follows: Two years ago she fell from her bicycle, cutting her