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Post Ureteroscopy peri renal hematoma leading to diagnosis of hemophilia and angiodyslasia colon- A rare clinical cluster.

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Abstract

Ureterorenoscopy is a common procedure, but there have been complications reported with it. Twenty eight year old male, previously diagnosed case of chronic kidney disease(CKD) with hypertension underwent ureterorenoscopy for upper ureteric calculus. He presented with a tender immobile lump in right flank on post operative day two which was a 14 cm organized hematoma on computerized tomography(CT). On post operative day four, he developed massive bleed per rectally. CT angiography was suggestive of angiodysplasia of ascending colon and underwent emergency right hemicolectomy for the same. On hematological workup, the patient was found to have Factor VIIIc deficiency (mild hemophilia). Our patient was hypertensive and known case of CKD which made him susceptible to perirenal hematoma. It is known to occur in patients of bleeding disorders like Chronic Idiopathic Thrombocytopenic Purpura. However, post operative hematoma occurring in a case of mild hemophilia has never been mentioned in literature. Angiodysplasia of colon has been associated with Von will brands disease, almost exclusively with a few subtypes. However its association with hemophilia has not been reported till date. Thus surgeons should be vigilant about hemorrhagic complications in hypertensive patients affected with CKD. Also hematological disorders should be kept in mind when dealing with hemorrhagic complications.

Key-words: Ureteroscopy, Perirenal Hematoma, Hemophilia, Angiodysplasia

Introduction

Ureterorenoscopy(URS) is a widely performed procedure for urolithiasis, especially in high risk patients and complex stones. But as the indications of URS have increased, there is also an increased risk of complications. The incidence of perirenal hematoma after URS is only 0.45% which shows its rarity.[1] Here we present a rare case of post URS complication which led to the diagnosis of a hematological disorder and an incidental finding of gastrointestinal angiodysplasia.

Case Report

Twenty eight year old male, previously a diagnosed case of chronic kidney disease (CKD) with hypertension presented with acute kidney injury and serum creatinine of 3.8 with right upper ureteric calculus. Following right double J(DJ) stenting, creatinine reduced to 2.3. Right URS with pneumatic lithotripsy and DJ stenting was subsequently done. On post operative day two, patient presented with pain in right flank, hematuria and fever, pulse of 110/minute and temperature of 38°C. Serum creatinine increased to 3.3 and white blood cell count was 13500/mm^3. Coagulation profile including prothrombin time (PT), international normalized ration(INR), bleeding time, clotting time were normal. A tender immobile lump was palpable in right flank. Computerized tomography(CT) showed a 14.8 x 9.4 cm organized hematoma in right renal fossa (Figure 1- Huge organized perirenal hematoma). Ultrasound guided aspiration was attempted, but only 5cc of blood could be aspirated, rest was untappable. Right retrograde pyelogram(RGP) suggested no leak from the collecting system.(Figure 2- Right RGP did not show any leak from collecting system). The patient was managed conservatively with higher antibiotics and serial hemoglobin and ultrasound monitoring. On post operative day four, he developed massive bleed per rectally. He passed almost one and a half litre of fresh blood mixed with clots. A fresh CT abdominal angiography was done after clearance from nephrologist in view of raised creatinine, which revealed angiodysplasia of ascending colon. He underwent emergency right hemicolectomy. Intraoperatively, he was found to have 1x1 cm cecal perforation and ascending colon was loaded with blood clots. He was transfused eleven pints of packed cells and sixteen pints of fresh frozen plasma in the perioperative period. On hematological workup, the patient was found to have Factor VIIIc deficiency which was 9.8% of the normal pooled plasma, leading to diagnosis of mild hemophilia. Histopathology of resected bowel segment confirmed angiodysplasia. His post operative recovery was mauled by depression and surgical site infection. Currently after one year, the perirenal hematoma has completely resolved and patient is on regular follow up in our and hematology OPD. (Figure 3- Plain CT on one year follow showed complete resolution of hematoma.)

Discussion

Subcapsular or perirenal hematoma after ureteroscopy is an unusual complication and described in literature after flexible ureteroscopy and laser lithotripsy.[2] Whitehurst LA et al reviewed the literature and concluded that various factors responsible for post URS perirenal hematoma are hypertension, trauma to PCS by guidewire insertion, high irrigation pressures leading to forniceal rupture and preoperative urinary tract infection. They also suggested CKD as a predisposing factor in affected patients as kidneys could be structurally weaker than those in their healthy counterparts, hence easily damaged. Our patient was hypertensive and known case of CKD which made him susceptible to perirenal hematoma.[1]

His factor VIIIc levels were 9.8% which is classified as mild hemophilia (normal 50-100%).[3] Perirenal Hematoma is known to occur in patients of bleeding disorders like Chronic Idiopathic Thrombocytopenic Purpura.[4] However, post op hematoma occurring in a case of mild hemophilia has never been mentioned in literature. Angiodysplasia has been associated with Von willebrands disease, almost exclusively with a few subtypes. However its association with hemophilia has not been reported till date.[5]

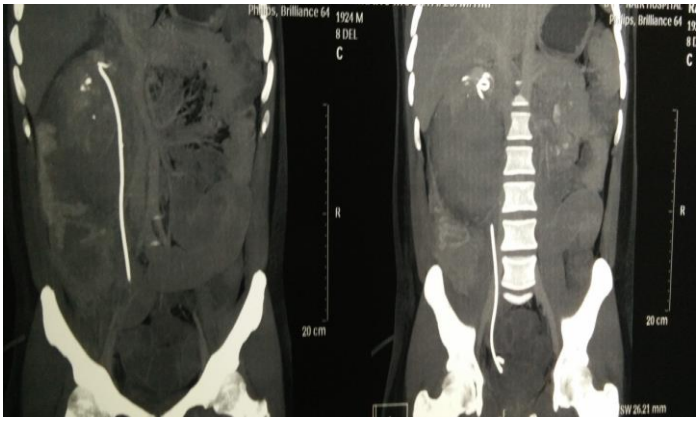

Figure 1- Huge organized perirenal hematoma

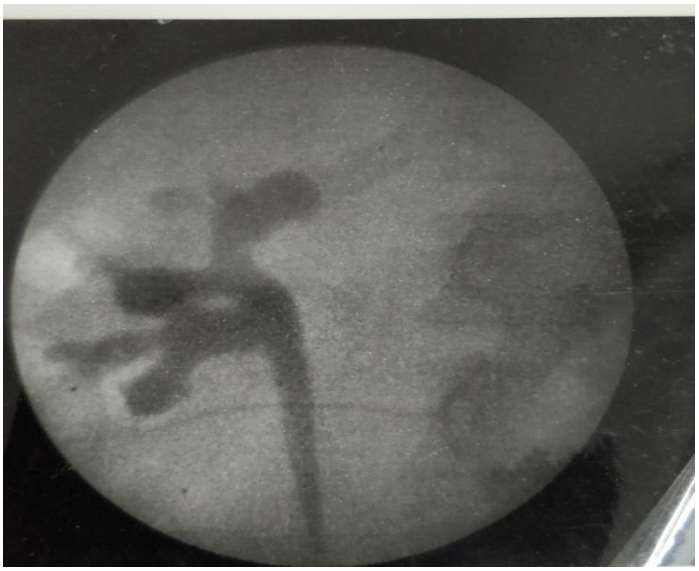

Figure 2- Right RGP did not show any leak from collecting system

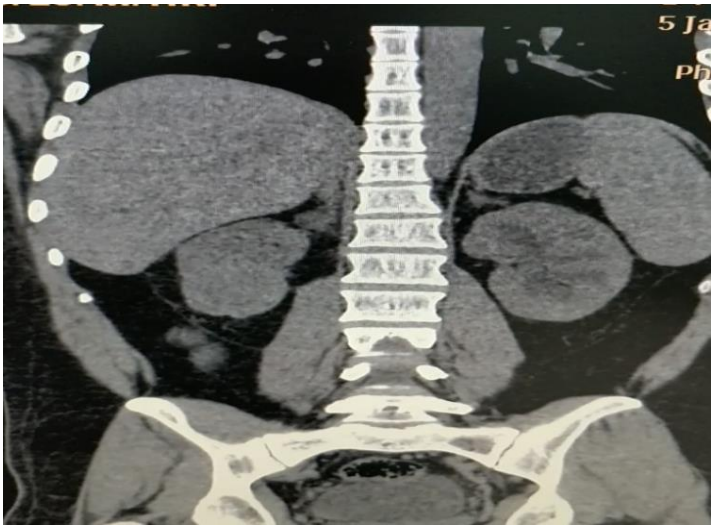

Figure 3- Plain CT on 1 year follow showed complete resolution of hematoma.

Conclusion

Perirenal hematoma can occur in bleeding diathesis, but the occurrence of post URS perirenal hematoma associated with hemophilia and angiodysplasia of the colon is a rare clinical entity and has never been reported in literature. Surgeons should be vigilant about hemorrhagic complications in hypertensive patients affected with CKD.

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