

RENAL PELVIC HAEMORRHAGE COMPLICATING EMPHYSEMATOUS PYELONEPHRITIS

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ABSTRACT

Subepithelial haemorrhage of the renal pelvis is a rare cause of haematuria and can be diagnosed based on radiographic findings. This haemorrhage often appears as a non-enhancing hyperdense mass in the renal pelvis on computed tomography, which sometimes results in unnecessary nephrectomy because it can mimic renal neoplasms. It can be managed conservatively, and its prognosis is generally benign. We report a case of renal pelvic haemorrhage complicating emphysematous pyelonephritis that needed emergent nephrectomy. Our case highlights the importance of careful observation for complications of urinary tract infection, although complications are rare.

KEYWORDS

Antopol-Goldman lesion, renal pelvic haemorrhage, haematuria, emphysematous pyelonephritis

LEARNING POINTS

- Renal pelvic haemorrhage is an uncommon cause of haematuria. It can mimic renal neoplasms, which sometimes results in unnecessary nephrectomy.
- Although the prognosis of renal pelvic haemorrhage is generally benign, careful observation for complications of urinary tract infection is important.

INTRODUCTION

Subepithelial haemorrhage of the renal pelvis is an uncommon cause of haematuria^[1]. On computed tomography (CT), this haemorrhage often appears as a non-enhancing hyperdense mass in the renal pelvis. In most cases, it can be treated conservatively, and its prognosis is benign. However, it can mimic a renal pelvic tumour, which sometimes results in unnecessary nephrectomy^[2]. Moreover, our case highlights

the importance of careful observation for complications of urinary tract infection, although complications are uncommon.

CASE DESCRIPTION

An 80-year-old woman presented to the emergency department with a one-day history of left flank pain and haematuria. She had a history of right staghorn calculi,

hypertension and ischaemic stroke. Her medications included aspirin and amlodipine. She denied any recent trauma. On presentation, her vital signs were normal. Her physical examination was unremarkable except for left costovertebral angle tenderness.

Abdominal CT revealed left hydronephrosis and a hyperdense occupying lesion in the left renal pelvis (Fig. 1). On the day after admission, the patient developed septic shock caused by emphysematous pyelonephritis (Fig. 2), which resulted in the need to perform an emergency nephrectomy (Fig. 3). A pathological examination revealed a subepithelial haemorrhage, and a bifid renal pelvis and pyelonephritis, without tumours. A careful history revealed that she had previously exhibited recurrent and spontaneously resolved gross haematuria for several years.

Thus, subepithelial haemorrhage of the renal pelvis due to a bifid renal pelvis and the use of aspirin were diagnosed. After postoperative intensive care, including antimicrobial therapy, the patient recovered and was discharged after a four-week hospital stay.



Figure 1. Abdominal computed tomography showing a hyperdense mass in the left renal pelvis (arrow) and staghorn calculi in the right renal pelvis

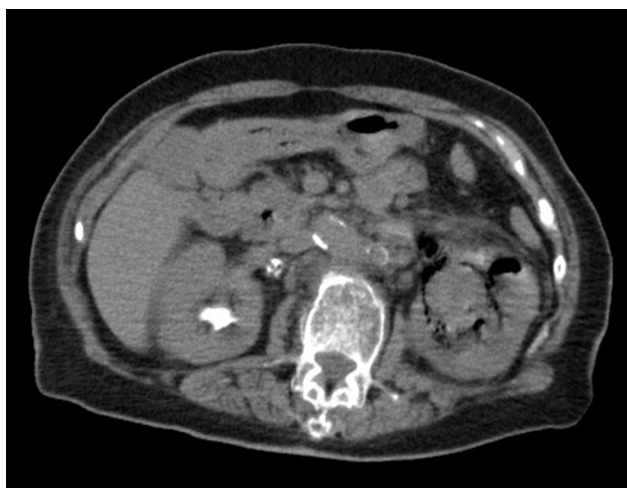


Figure 2. Abdominal computed tomography showing left emphysematous pyelonephritis

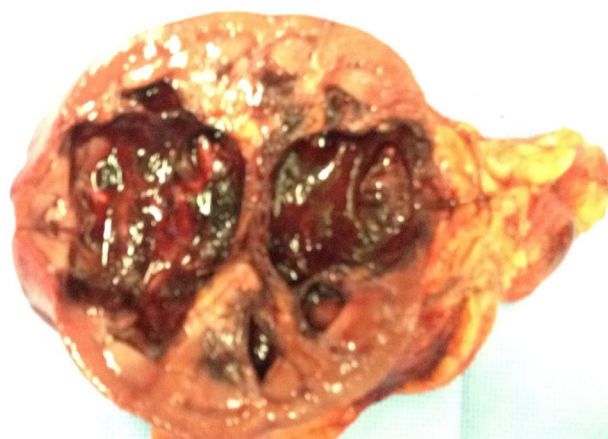


Figure 3. Gross pathological examination revealed renal pelvis haemorrhage, bifid renal pelvis, and pyelonephritis

DISCUSSION

Subepithelial haemorrhage of the renal pelvis, also known as an Antopol-Goldman lesion, was first reported in 1948^[3]. Although it can occur at any age, it is more common in the elderly^[4]. Possible conditions associated with subepithelial haemorrhage of the renal pelvis include trauma, use of anticoagulants, analgesics and chemotherapy, and congenital malformations such as bifid pelvis^[4]. On CT, this haemorrhage often appears as a non-enhancing hyperdense mass in the renal pelvis, which can mimic renal neoplasms. Antopol-Goldman lesions are generally benign and can be managed conservatively. However, our case highlights a potential risk of fatal complications, including emphysematous pyelonephritis. To our knowledge, this is the first report of an Antopol-Goldman lesion complicating emphysematous pyelonephritis. Given that the risk factors for emphysematous pyelonephritis are diabetes mellitus and urinary tract obstruction^[5], the Antopol-Goldman lesion might cause a localised urinary obstruction, leading to emphysematous pyelonephritis. Careful observation for complications of urinary tract infection is important in patients with Antopol-Goldman lesions.

CONCLUSION

Renal pelvic haemorrhage is an uncommon cause of haematuria. A lack of awareness of this condition can result in unnecessary nephrectomy because it can mimic renal neoplasms. Although the prognosis of renal pelvic haemorrhage is generally benign, careful observation for complications of urinary tract infection is important.

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