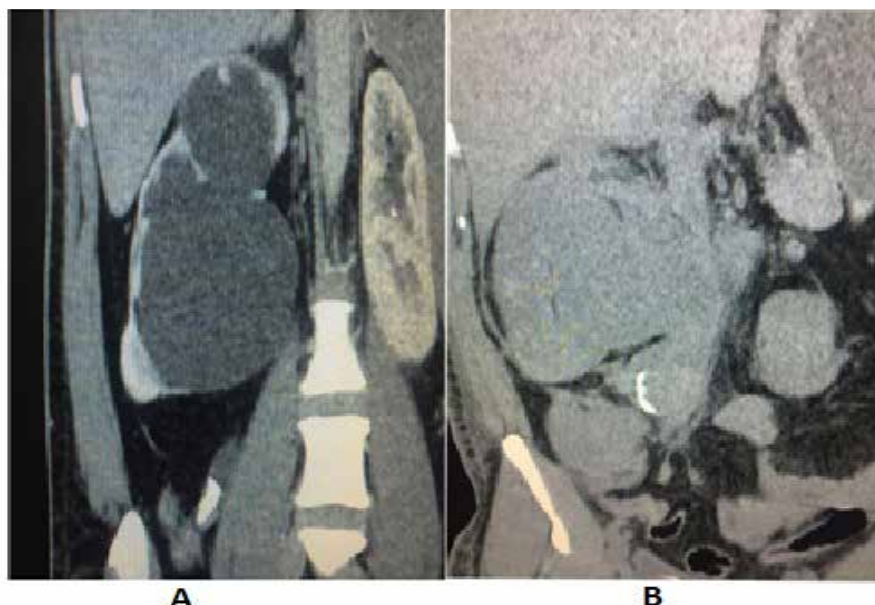


## Urological Surgery in CML- Is it Safe?

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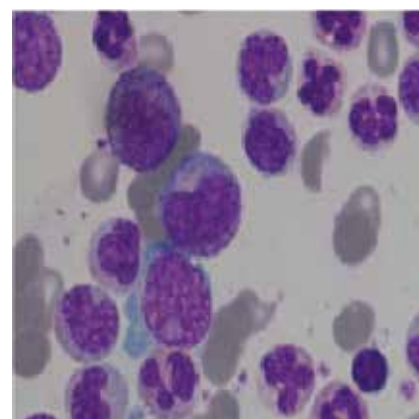
**Fig. 1: (a) Pre-operative CECT showing non functional kidney with papery thin parenchyma due to mid ureteric stone; (b) Postoperative CT shows PCS full of haemorrhagic material**

Chronic Myeloid leukaemia (CML) was once presumed to be inevitably fatal. The advent of Tyrosine Kinase inhibitors (TKI) improved prognosis and life-span. Majority present with non-specific symptoms due to Pancytopenia and it's very difficult to diagnose these patients. There are meagre reports of surgical outcomes in CML patients. Herein, we present a case of urologic surgery in a CML patient with special emphasis on the post operative period.

42 year man presented with fever, extreme weakness, loss of appetite and dysuria. He had been diagnosed to have Ureteric stone 4 years back, but had avoided treatment. He was admitted with an initial working diagnosis of Urinary tract infection due to Ureteric stone. His urine revealed plenty of pus cells and his haemoglobin at admission was 9.5 gm%. Urine culture subsequently grew *E. coli* and antibiotics were given according to sensitivity pattern. Contrast enhanced CT showed impacted 1.5 cm right midureteric stone with poorly functioning kidney (Figure 1A). He was advised Nephrectomy

due to poorly functioning kidney, gross hydronephrosis and thin parenchyma, but was unwilling. Patient was initially planned for Endoscopic removal of stone, but Ureter could not be negotiated due to gross tortuosity. Patient subsequently underwent Laparoscopic Ureterolithotomy. Post-operative period was uneventful, except for mild haematuria which subsequently cleared. Patient was discharged 2<sup>nd</sup> postoperative day. He presented after 25 days in comatose state. CT Brain revealed massive bleed and plain CT abdomen showed pelvi- calyceal system (PCS) full of haemorrhagic material (Figure 1B). At evaluation in Emergency, the total leukocyte count was 3, 62,000/ cu. Mm. Peripheral smear was consistent with Chronic Myeloid Leukaemia (CML) (Figure 2).

The incidence of CML is around 1-2/ 1, 00,000 population. CML is known to



**Fig. 2: Peripheral smear consistent with CML**

present silently without characteristic features. Initial diagnosis is based on peripheral smear examination. In present patient, we misdiagnosed presenting symptoms as that of Ureteric stone induced UTI.

Incidence of haematuria in haematological dyscrasias is not clearly defined. A recent study in Dengue patients showed significant incidence probably due to thrombocytopenia.<sup>1</sup> Pre- operatively in present patient, we thought that haematuria may be due to stone disease and post-operatively minimal haematuria was expected because of Ureterolithotomy. In CML though platelet counts are normal, they are grossly dysfunctional. This may explain pre-operative haematuria and gross post-operative haemorrhagic collection in PCS.

Post-operative outcome in CML patients is not well defined. There are 2 reports of cardiac surgery outcomes, both of which show increased morbidity and mortality, even in well prepared patients (pre-operative TKI for 6 weeks).<sup>2</sup> There are no reports of any unplanned surgery in CML patients. At initial admission, we felt that patient might need Laparoscopic

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Ureterolithotomy, a procedure associated with minimal blood loss. Hence, in spite of low haemoglobin levels, due importance was not given to it.

The present case highlights that consequences of surgery without pre-

operative TKI will be disastrous in non-diagnosed patients. We also feel that we could have avoided stormy post-operative course by ordering peripheral smear examination at initial presentation, especially in presence of anaemia.

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