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**Original article**

**Diagnostic value of scout view CT-KUB in management of lower ureteric calculus**

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**ABSTRACT**

**Introduction:** Lower ureteric calculus is usually managed on Medical Expulsive Therapy. These patients require periodic imaging studies to monitor stone position and to assess for hydronephrosis. There is high variability in determining the choice of imaging protocols to observe progression of ureteral calculi for follow up. Widespread use of NCCT KUB for initial diagnosis lead to use of scout view of NCCT obtained during NCCT KUB in management of ureteric calculus owing to its reduced radiation dose. These studies recommend that Scout view should substitute baseline KUB radiograph. This study aims to determine the effectiveness of scout view of CT and its ability to assist one in follow up imaging of lower ureteric calculus .The study also compares the imaging modalities used in lower ureteric calculus management with aim to determine the most sensitive imaging modality, with minimal radiation and most cost effective which can be utilised for periodic follow-up imaging.

**Methodology:** The study was a prospective study involving 125 diagnosed patients of lower ureteric calculus, in Department of Radiology and Surgery of PGIMSR & ESI Hospital, Basaidarapur, Delhi between Jan 2011 to Dec 2013. All the patients were administered either alfuzosin or nifedepine. Diclofenac sodium was given as a standard pain reliever. X-Ray KUB, Ultrasound KUB and NCCT KUB were used for initial investigation. Scout view KUB obtained during NCCT KUB study was analysed. Subsequent follow up was investigated using X-Ray KUB, Ultrasound KUB and in selected cases Low dose targeted NCCT KUB was done. The presence or absence of calculi, location & size of each calculus, HU value and passage of calculus was recorded.

**Results:** In lower ureteric calculus the overall sensitivity of X-Ray KUB was 68.8% and scout view CT was 29.6%. The study found combination of X-Ray KUB and USG examination has a sensitivity of 94.4% and can be used as an important tool in follow up imaging.

**Conclusion:** Scout view CT is least sensitive to diagnose lower ureteric calculus. Latest CT Scanners use minimal radiation and very low mAs to generate a scout view hence there is considerable loss in quality of the image and decrease in its diagnostic value. Follow up imaging should be done with combination of X-Ray KUB and USG. This combination is cheaper, easily available and gives less radiation to the patients. Moreover, NCCT KUB remains the choice of initial imaging modality.

**Key words**- Lower ureteric calculus, Scout view NCCT KUB, NCCT KUB, X-Ray KUB, and Ultrasound KUB.