

45. **OUTCOMES AND COMPLICATIONS OF PERCUTANEOUS NEPHROLITHOTOMY (PCNL) AT AL-RIBAT UROLOGY CENTER (OMER SAWI HOSPITAL)**

Mohammed Hammad Jaber Amin¹, Hussam Eldein Hassan Mohammed², Hussain Mohammed Ahmed², Hassan Ishag Hassn², Mustafa Altayeb Ibrahim Magbol², Sami El Arbab Saeed³.

¹ Fifth-year Medical Student. Alzaiem Alazhari University, Khartoum, Sudan.

² MBBS. Alzaiem Alazhari University, Khartoum, Sudan.

³ Department of Surgery, Alzaiem Alazhari of University, Khartoum, Sudan.

BACKGROUND: Percutaneous nephrolithotomy generally is safe, effective, and associated with a few but specific complications. However, the definition of complications of PCNL and their management still lacks consensus. PCNL is the first-line approach for large, multiple, and inferior calyx renal stones according to the European Association of Urology (EAU) guidelines. We aimed to evaluate the Technique, Outcome, and Complication of percutaneous Nephrolithotomy at Al-ribat Urology Center (Omer Sawi Hospital).

METHODS: A prospective, institutional-based cross-sectional study was used to investigate all patients presented to the study area with renal stones during the period from November 2019 to January 2020 in Al-Rebat Hospital. A total of 28 patients were enrolled using multi-stage sampling. The researcher completed a validated questionnaire consisting of several sections to assess outcomes and complications of percutaneous nephrolithotomy. **RESULTS:** the study assessed the outcome of PCNL among 28 patients. The study found that the mean size of stones recorded was 1.25 cm, and the stones were on the left and right kidneys in 53.6%, and 46.4% respectively. Stones present by a percentage of 10.7%, 28.6%, and 53.6% in the upper and lower calyx and pelvis respectively. The stones were rounded in 78.6% and staghorn in 21.4%. The stone was single in 53.6% and multiple in 46.4%. All operations were done under fluoroscopy guidance. Patients were supine in 25% and prone in 75% of the operations. The mean operative time was 27.9 minutes calculated from puncture time does not include retrograde and positioning. In addition to that 57.1% of the patients had nephrostomy tubes and double J. 92.9% of the patients were stones-free at the end of the operation. Injury to the surrounding organs did not occur. Mild bleeding occurs in 10.7% of the patients, in which blood transfusion was necessary. Extravasation of fluid occurs in 10.7%. Fever occurs in 42.9%. Most of the patients stay for 1 day postoperatively 57.1%. **CONCLUSION:** This study demonstrated that PCNL is a safe elective, minimally invasive surgical modality with good outcomes and lower incidences of major complications.

Key words: Percutaneous Nephrolithotomy; Urinary Calculous; Surgical Outcomes; Complications (Source: MeSH-NLM).