

## PP-066

### Staghorn morphometry for predicting PCNL outcome

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**Objective:** Analysing staghorn morphometry for predicting PCNL outcome.

**Materials and Methods:** In our prospective analysis, CT Urography of 38 patients depicting the staghorn calculus was analysed with 3D-DOCTOR™ software preoperatively. The stones were classified in the following groups: type 1 staghorn <5,000 mm<sup>3</sup> total stone volume (TSV) and < 5% unfavourable calyx stone percentile volume (UFCSPV); type 2a: 5000-20,000 mm<sup>3</sup> TSV and <5% UFCSPV; type 2b < 20,000 mm<sup>3</sup> TSV and >5% UFCSPV; type 3: >20,000 mm<sup>3</sup> and any UFCSPV. Patients underwent PCNL monotherapy. Expert operating surgeon was blinded about the data. All attempts were made to minimise number of stages & tracts during PCNL. The morphometry analysis was compared with per operative findings.

**Results:** In type 1, type 2A, type 2B and type 3 respectively 4, 9, 21, 4 numbers of patients got classified. They required 1±0, 1.40±0.68, 2.72±0.9 & 3.85±1.40 tracts & 1±0, 1.22±0.35, 1.48±0.60 & 2.5±0.58 number of stages for PCNL. Complete clearance was achieved in 100% of type 1 & 2 A staghorn stones. 2 out of 21 patients in 2B category (9.5%) & 1 out of 4 patients in category 3 (25%) had partial clearance & required auxiliary procedures.

**Conclusion:** This morphometry based staghorn stone classification classifies staghorn stones into classes which are clinically relevant and can predict PCNL outcome.

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