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Introduction & Objectives: Retrograde flexible ureteroscopic approach is a reasonably safe technique. However, septic complications are probably the main concern during these procedures. The aim of our study was to review the septic complications associated with flexible ureteroscopy and the factors influencing them.

Materials & Methods: We reviewed the septic complications in the last 300 consecutive cases of retrograde flexible ureteroscopic approach for pyelocaliceal lithiasis. Stratification according to Clavien-Dindo classification and influence of previous positive urine cultures, previous stenting and use of ureteral access sheath were analysed.

Results: Septic complications occurred in 16.3% of the cases. Most of them (69.4%) were Clavien II. Clavien IIIa complications occurred in 19.2% of the cases, Clavien IVa in 12.2% and Clavien IVb in 8.2% of the cases. Previous positive urine cultures were not associated with an increased risk of occurrence of such complications. 40.8% of septic patients were pre-stented while 59.2% of them were not. Use of ureteral access sheath was the most powerful parameter to predict occurrence of septic complications: 77.6% of septic patients were operated without an ureteral access sheath while in only 22.4% of them such a device was intraoperatively used.

Conclusions: Most of the septic complications seem to be mild. Ureteral access sheath is a protective factor for such complications. Previous positive urine cultures doesn't seem to influence their occurrence.