

P018 Risk factors for lithiasis recurrence after endourological management of stones

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Introduction & Objectives: Nearly one in two patients (pts) have had recurrent urinary stone (RUS) disease after their first episode of renal colic despite undergoing effective treatment. The objective of this study is to determine the recurrence rate of lithiasis after endourological management of urinary calculi and to identify the risk factors for these recurrences.

Materials & Methods: Data was gathered in a retrospective fashion from all pts who have been treated for ureteral or kidney stone by ureterorenoscopy (URS) from May 2014 to January 2017 in our university hospital. All pts were followed-up post-operatively and were asked to do a metabolic workup and to analyze their extracted stones to guide us to an optimal dietary regimen. We evaluated the patients' demographics, their stones characteristics and searched for RUS among them. All pts who had nephritic colic after URS were considered to have a RUS. We compared the clinicopathological features of pts with or without RUS.

Results: We collected 265 pts that were treated for nephrolithiasis. We excluded 75 pts from our study; 46 pts who were followed-up for less than 1 year, 13 pts who did not show up for follow-up after URS, 11 pts who had residual stones after URS and 5 pts who were deceased. The remaining 190 pts were included in the study. The median age and median body mass index (BMI) of the pts were 57.5 years of age and 25.2 kg/m², respectively. Analyses of the stones was performed in 117 (61.5%) pts. The most common types of stones were calcium oxalate monohydrate stones (23.2%), mixed stones (20.5%), calcium oxalate dihydrate stones (6.8%) and uric acid stones (5.8%). At the end of a median follow-up of 32 months (13 – 61 months), 49 pts (25.8%) presented a RUS. In the univariate analysis, the risk factors for RUS were a BMI greater than 25 kg/m² (HR: 2; p < 0.05), diabetes (HR: 3.73; p < 0.008) and smoking (HR: 3.1; p < 0.039). However age (HR: 0.96; p < 0.003) and blood hypertension (HR: 0.37; p < 0.027) were protective factors. The stone characteristics, urological history and alcoholism had no apparent effect on stone recurrence. The recurrence-free survival curve is shown in Fig 1.

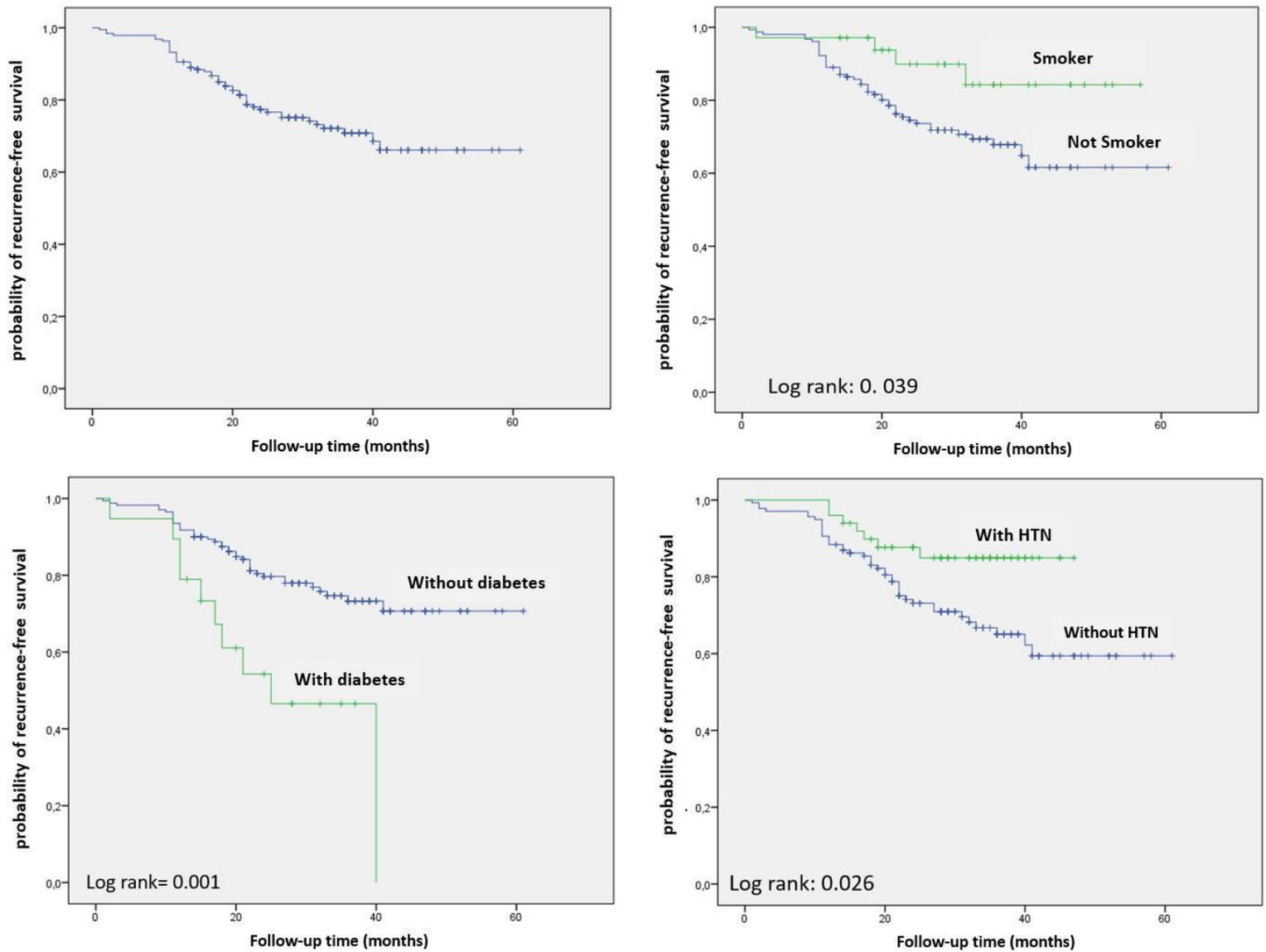


Figure 1 : Kaplan-Meier survival curves for recurrence-free survival

Conclusions: RUS is common after urological management of urinary stones. In this study 25.8% of patients had RUS after URS with a median follow-up of 32 months. Diabetes and smoking were risk factors for RUS, while age and blood hypertension were factors that decreased the risk of recurrence.