

**PREDICTION OF OUTCOME OF LAPAROSCOPIC
NEPHRECTOMY FOR NON-FUNCTIONING
HYDRONEPHROTIC KIDNEYS**

BY

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SUMMARY

This was a prospective randomized study for prediction of outcome of laparoscopic nephrectomy for hydronephrotic non-functioning kidneys. This study included 40 patients. thorough history and full clinical examination was done for all study cases with exclusion of patients unfit for laparoscopic surgery consent for conversion to open surgery was informed and taken from all patients.

Collected data was analyzed by univariate and multivariate tests to predict the risk factors for laparoscopic nephrectomy for non-functioning hydronephrotic kidneys.

This prospective study was included 26 males and 14 females. the mean age was 45.32 ± 14 y. Nephrectomy for right non- functioning kidney was done in 16 patients. Eight patients had elevated serum creatinine (above 1.3 mg /dl). The mean body mass index was 28.37 ± 4.89 . 15 patients had history of previous urological intervention. 21 patients had urinary stone disease. pyonephrosis was found in ten patients. The mean volume of hydronephrosis for our study cases was 468.7 ± 186.7 .

Elective conversion to open surgery was required in two cases due to severe adhesion and failure to progress. Estimated mean blood loss in our study was 274 ± 87.9 ml. average operative time was 190 ± 30.4 min. the mean hospital stay was 3.05 ± 1.2 Postoperative complications were reported in 12 patients classified with modified clavien system.

On studying the impact of gender , age, side of removed kidney , elevation of serum creatinine, presence of urinary stone, history of previous urological intervention and presence of turbid contents of pelvicalyceal system on outcome of the procedure as operative time, estimated blood loss ,hospital stay and incidence of intra- and post operative complication.

we found that pyonephrosis is the most considerable risk factor that should be estimated by the surgeon. pyonephrosis was associated with statistically significant increased operative time (p-value =0,041) , hospital stay (p-value=0,005) on multivariate linear regression test. Pyonephrosis significantly increases the risk of incidence of complication in laparoscopic nephrectomy cases (p-value=0,035) on multiple logistic regression test. Cases had history of previous urological intervention showed statistically significant increased mean blood loss (p-value =0,010) on multiple linear regression test. we found that history of previous urological intervention was significant risk factor for incidence of complication (p-value=0,034). Presence of Urinary stone disease increased operative time by about 8 minutes, estimated blood loss by about 28 ml and hospital stay. Although, this impact didn't reach to be statistically significant. Presence of urinary stone disease wasn't significant risk for occurrence of complication (p=0,994) in this study cases.

Study cases were divided according to average of volume of hydronephrosis. Cases with volume of hydronephrosis more than 500 ml were 16 patients. Increased volume of hydronephrosis was associated with increased operative time by about 13 minutes and increased blood loss by about 28 ml. This impact wasn't statistically significant. Volume of hydronephrosis wasn't risk factor for incidence of complication in cases of hydronephrotic non-functioning kidneys undergoing nephrectomy.

The present study concluded that pyonephrosis and previous urological surgical history are the most important considerable risk factors.