

## SUMMARY AND CONCLUSION

PCNL was first described by **Fernstorm** and **Johansson** in **1976** in prone position, which is accepted globally because of its familiarity, excellent understanding of the anatomy in this position, and reduced risk of visceral complications.

PCNL in supine position was first described by *Valdivia uria et al*; in **1998** and has similar advantages as prone position. In addition to greater versatility of stone manipulation along the whole upper ureter, less patient handling , needing drape only once , ability to perform simultaneous PCNL and uretroscopic procedures , and better control of the airway during the procedure.

The aim of this work is to compare between the outcomes of PCNL in the complete supine position and the standard prone position.

The study conducted on 60 patients with renal stone disease, from September 2009 to June 2011 in urology department, Benha university hospital, and were divided randomly into two groups: group (A), 30 patients underwent percutaneous nephrolithotripsy in prone position and group (B), 30 patients underwent percutaneous nephrolithotripsy in supine position.

Comparison between both groups had been done as regard to; calyceal puncture, operative time, stone free rate, intra-operative blood loss, intra & postoperative morbidity and hospital stay.

As regard to calyceal puncture, in prone position, lower calyceal puncture was done in 60%, middle in 20% and upper in 6.7% and in supine position, lower in 72.6%, middle in 16.7%, and upper in 3.3% with no significant statistical difference between both groups.

The mean operative time in prone group was 76.8 min. while in supine group was 55.43 min. The stone free rate in prone group was 86.7% and in supine group was 83.3%. The blood loss required blood transfusion in prone group was 10% and in supine group was 6.7%. The intra-operative morbidity of prone group was 16.7% and in supine group was 10%. The post-operative morbidity of prone group was 20% and in supine group was 23.3%. The mean hospital stay of prone group was 3.87 days, and in supine group was 3.33 days with no significant statistical differences between both groups

In conclusion, PCNL in supine position is safe, effective and suitable for the patients especially morbidly obese patients, it has several advantages, like less operative time because of less patient handling and needing drape only once, ability to perform simultaneous PCNL and URS procedures, better control of airway during the procedure and lastly the surgeon is sitting while doing this procedure. Because of its advantages in high-risk patients, it is necessary that every endo-urologist increases his/her skills in this technique. However, the supine position is not a substitute for the prone position for PCNL. We need more prospective randomized studies in this field to draw an affirmative conclusion.