

PP-012b

Assessment of pediatric and adult percutaneous nephrolithotomy complications by modified claviem grading system. A comparative study

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Intorduction and Objective: A retrospective comparative study to determine the difference between pediatric and adult percutaneous nephrolithotomy complications profile when stratified by modified claviem grading system.

Material and Methods: With IRB approval we reviewed our patient medical record of all pediatric PCNL between July 2007 to March 2011, and equal number of randomly selected adult PCNL data was also reviewed, both groups were compared in terms of perioperative complications according to modified claviengading system and its efficacy.

Results: A total of 114 procedures were done in 104 and 112 patients in pediatric (PG) and adult group (AG) respectively. Gender distribution, stone size, preoperative urine culture status, stone site and congenital anomalies were comparable in both groups. 2 patients in PG and 20 patients in AG had co-morbids (p.001). Access from upper pole was performed in 85%and 61% in PG and AG respectively (p 0.002). Complete stone free rate was 74% (PG and 64% (AG) in single session of PCNL (p 0.162), 35% in PG and 36% in AG had grade 1 complication (mild fever). Blood transfusion rate was same in both groups (10%), 6% in AG required change of antibiotics for persistent fever while 1 % in PG, overall grade 2 complications events were more in AG 14% Vs 10% in PG (p 0.273). 6 patients in AG (2 hydrothorax, 2 DJ stenting, 1 gross hematuria required angio embolization and one nephrectomy) and 2 patients in PG (DJ placement) had grade 3 complication (p 0.140). None in PG while one patient had grade 4 and 5 complication in AG (p 0.5).

Conclusion: Percutaneous nephrolithotomy is equally effective in both groups. Pediatric and adult PCNL complications are comparable when assessed by standardized modified claviem grading system.

As published in the *Supplement of AFJU, Volume 18 (2012), 1st ESD "Experts in Stone Disease" Conference (page 26)*