EFFECTS OF UNILATERAL PARTIAL URETERAL OBSTRUCTION ON INFLAMMATORY AND FIBROGENETIC PROCESES IN RAT KIDNEY

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Aim

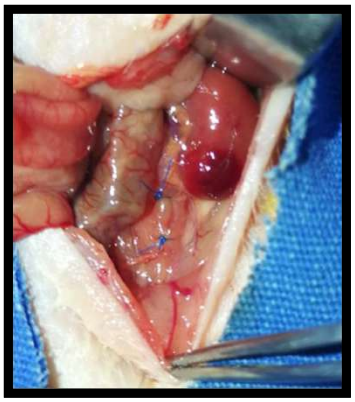
- ✓ There are many experimental and clinical studies investigating renal injury due to ureteropelvic junction obstruction.
- ✓ However, the exact roles of inflammatory and fibrogenetic pathways in the renal injury have not yet been elucidated.
- ✓ We aimed to explore the roles of both IL-6-related inflammation and STAT3-related fibrogenesis in a rat model of unilateral partial ureteral obstruction (PUO).

Materials and Methods

18 Wistar albino rats
Aged 21 days

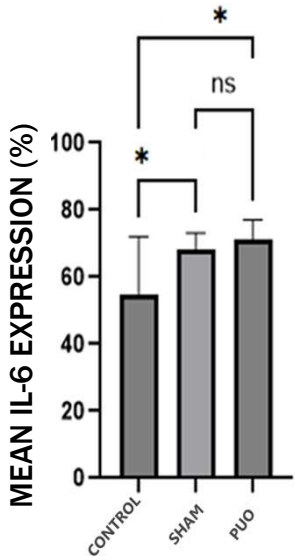
Sham group (n=6)
Control group (n=6)
PUO group (n=6)

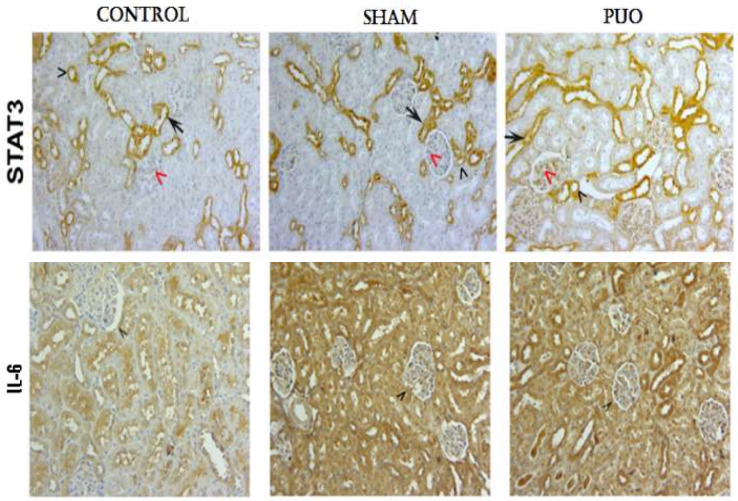
Sacrification
After 14 days

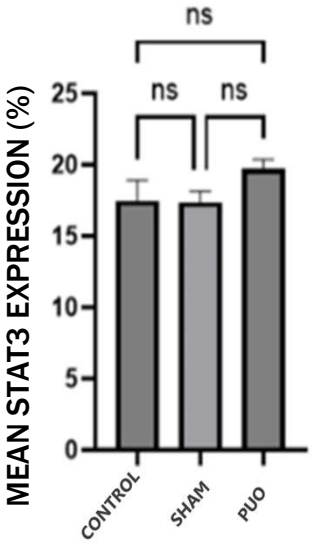


Immunohistochemical Examination (Image J analyzer)
Inflammatory process → IL-6
Fibrogenetic process → STAT3

Results







*p<0.001 ns: non significant

ns: non significant

- ✓ Although IL-6 expression significantly increased in the sham and PUO groups compared to the control group, no significant difference was found between the sham and PUO groups.
- ✓ STAT3 expression was higher in the PUO group than control and sham groups but no significant difference was found among all groups.

Conclusions

- ✓ The increase in IL-6 expression in the PUO group suggests a role for IL-6 in the proinflammatory response following PUO.
- ✓ Although not significant, the increase in STAT3 expression may reflect an early-stage fibrogenic response.
- ✓ Further studies with longer duration and different inflammatory/fibrogenetic markers are needed to elucidate the molecular mechanisms underlying PUO-associated renal injury.