

'Double 'J' Silicon Stent: A Word of Caution in Urological Practice: Experience from High Stone Forming, High Congenital Anomaly Area of Jizan, Saudi Arabia

Introduction and Objectives: In a retrospective study of 22 years (1988–2010), we studied 508 cases of stents, put in our hospital with available records for wide ranging procedures, and interesting observations were made. Our aim is to evaluate common complications met with, suitable corrective measures applied and recommendations made.

Materials and Methods: Of 508 cases with stent age-wise presentation: Range 1 month to 92 years (mean – 58.6 yrs). Duration of stent: 7 days to 3.5 years (mean=1.8 months), Pathology / procedure-wise – ureterocele fulguration: N56, (11.4%), post pyeloplasty: N86 (16.07%), ureteroneocystostomy N46 (7.9%), V.V.F. repair: N21 (3.7%), iatrogenic gynecological ureteric injury: N36 (6.02%), bilharziasis: N22 (3.8%), tuberculosis: N2 (0.03%), retroperitoneal fibrosis: N2 (0.03%), PCNL: N16 (2.6%), ureteroscopy with US/Holmium laser lithotripsy: N26 (5.3%), ureterolithotomy: N42 (7%), pyelolithotomy: N62 (12.02%) post-cystectomy diversion: N29 (5.01%), miscellaneous obstructive: pre ESWL. renal stone, steinstrasse, and ureteric obstruction: N62 (12.02%).

Results: Stent Related Complications and Treatment

1. Hard stone formation N6 (1.1%) – all recurrent stone formers of duration 6m– 3.5 years (lost to follow-up) – needed repeated E.S.W.L. and open operation in 2 cases.
2. Struvite stone N16 (2.9%) – Of all stone formers (duration mean: 4.2 months)
3. Minor encrustation – N82 (10.4%) – (5.2% stone formers – mean duration – 3.2 months)
4. Disintegration – N3, duration 1 – 3 years, needing open surgery in 2 due to obstruction.
5. Stent calcification – N4 – 1 – 3.5 years, E.S.W.L. / endoscopy in 3, 1 open procedure.
6. Infection – no major problem, easily treatable bacterial except one fungal mucormycosis treated with difficulty.

Conclusion: A universally-applied, safe useful procedure. In over 97.3%, no significant problem, successful endoscopic removal P<0.001%. Considerable problem in 2.4% - needing ESWL, pyelolithotomy, ureterotomy, etc. especially with cases with long duration, recurrent stone former and lost follow-up cases despite tough protocol. Recommendation: Caution, tough protocol, patient information, strict follow-up duration (less than 3 – 6 months especially in recurrent stone formers), avoiding unnecessary stenting in non-obstructive, small renal stones pre-E.S.W.L (<1.5 cm x 1.5 cm stones prior to E.S.W.L.) is the key to success.