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POST-BULBAR URETHROPLASTY PERI-CATHETER URETHROGRAM (PUG), IS IT REALLY REQUIRED?

Hypothesis / aims of study

Is the routine use of PUG's required in the management of patients post bulbar urethroplasty to guide catheter removal.

Study design, materials and methods

We retrospectively reviewed all bulbar urethroplasties performed by 2 surgeons in a tertiary referral centre between 2008 and 2015. PUGs were performed 3 to 4 weeks post-operatively following local protocol before catheter removal. Cases with extravasation had interval PUGs to confirm healing. Following this, rate of stricture recurrence was assessed in correlation to rate of extravasation.

Results

A series of 108 patients with a mean age of 47 years and a mean follow-up of 24 months were included. The mean stricture length was 2.3 cms. Of these, 11 (10.2%) were primary anastomoses (PA) and 97 (89.8%) were buccal graft (BG) urethroplasties. Mean time to initial PUG was 27 days.

The extravasation rate at post-operative PUG was 8.3% (9/108) but only 4.6% (5/108) of these were classified as 'significant', requiring delayed catheter removal and subsequent interval PUG.

There was no statistical difference between the rate of extravasation following PA (1/11) and BG urethroplasties (8/97) (Fisher-exact: $p = 0.353$). The overall recurrence rate of stricture was 10.2% (11/108). There was also no statistical difference between the rate of stricture recurrence in patients with significant extravasation was 40% (2/5) compared to 8.7% (9/103) in those showing no extravasation on PUG (Fisher-exact: $p = 0.0779$).

Interpretation of results

Extravasation was seen in only 8.3% (9/108) patients with no statistical difference between PA and BG urethroplasties. Significant extravasation was seen in only 4.6% (5/108) of patients, delaying catheter removal. This suggests that catheters could have been removed successfully in 95.4% (103/108) of patients without the need for an initial PUG. This represents a significant potential saving in resources.

Significant extravasation was presumed to be due to poor wound healing associated with haematoma, infection, ischaemia and other comorbidities such as immunosuppression, diabetes, steroid use and poor nutrition.

There was no difference in stricture recurrence in patients with no extravasation and those with a non-significant extravasation. Catheters were retained for an additional 1 – 2 weeks in cases with significant extravasation but this did not affect the risk of increased stricture recurrence when compared with cases with no, or no significant extravasation. Due to this, there seems little benefit in performing a PUG except in those cases where there is at least an unfavourable associated comorbidity.

Concluding message

Given the low rates of extravasation in our series, we suggest that post-operative PUGs should not be carried out routinely and only performed in selected cases with prior consideration of co-morbidities and factors possibly affecting wound healing. However, it is apparent that further studies are required to identify these risk factors more clearly.

Disclosures

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