

Orandi Urethroplasty :

We start our new section presenting the article, published in 1968 by Ahmad Orandi, reporting the description of the new surgical technique for urethral stricture repair using one-stage procedure, utilizing the principles of pedicle skin grafting.

ARTICLE REPORT:

Orandi A. One-stage urethroplasty. *BJU* 1968; 40: 717-719.
(please see the enclose PDF)

Barbagli's comment:

In the **Introduction**, Orandi quoted the Johanson's two-stage procedure suggesting that this technique "*carries a morbidity of six weeks to six months depending of the outcome of the first stage*". This is an interesting comment to the Johanson's procedure, which may require, in some patients, repeated revisions of the first-stage, before to perform the second-stage urethral closure. Orandi suggest that the one-stage procedure "*carries a morbidity of 10 days*".

In the **Technique**, Orandi suggest that this procedure can be used for repair of penile or perineal urethral strictures and for long peno-bulbar strictures, "two separate grafts, one perineal and one penile, have been used". This is an important suggestion about the repair of pan-urethral strictures, because in year 1968, the literature about pan-urethral stricture repair is really missing. Unfortunately, the description of the surgical technique and the related drawings are very poor, and some important aspects of the technique are missing. But you need consider that the article is published in year 1968!

In the **Case Reports and Results**, the Author reported a series of 10 patients, followed from 3 to 11 months, with 1 failure.

The description of the Results is very poor, and the Author don't report may important data about the strictures features: site, etiology, length, previous treatment. Moreover, the follow-up is very short.

In the **Discussion**, Orandi reported: "*A pedicled skin graft generally takes, provided its blood supply is adequate. This is in contrast to free skin grafting, particularly where revascularization is likely to be hindered by unavoidable infection.*" Our current experience clearly showed that this is not true and the risk of infection is higher in patients who underwent skin flaps urethroplasty compared to free grafts.

In 1972, Orandi reported the results of his urethroplasty in 19 patients with 4-year follow-up. One patient had stricture recurrence and 2 patients grew hair and formed stones into the grafted area (1).

In 1975, Blandy and Singh, reported as following: "*Leadbetter and Leadbetter referred to a method of letting in an island of skin based on a pedicle of dartos muscle as a means of treating penile strictures in children in one stage. This technique received little attention until it was described again by Orandi*). Following Orandi's publication, we tried this method for a few anterior urethral strictures and were pleased with its simplicity and its good results" (2,3).

In 1985, Webster and Robertson, reported a well-documented series of 11 patients who undergone vascularized skin island urethroplasty, and the stricture recurred in 1 patient, and in 3

patients pseudodiverticula occurred at the grafted area, requiring surgical revision. Webster et al. reported as following: "*We found the Orandi repair to be an excellent primary procedure for strictures of the penile urethra...The chief limitation on the use of the Orandi repair in the penile urethra is the availability of penile skin...In our series the major difficulty encountered with this repair was the creation of too redundant a urethra with resultant urinary or seminal pooling and subsequent incontinence or ejaculatory failure*"(4).

In 2008, Andrich and Mundy reported as following: "*For the penile urethra the Orandi technique is useful for nonobliterative strictures within the penile shaft that are not due to BXO. One has to be careful to get the width of the flap right, and this is not easy to judge which is why the procedure carries a significant complication rate. Nonetheless this remains the gold standard, albeit faut de mieux*" (5).

References

1. Orandi A. One-stage urethroplasty: 4-year followup.
J Urol 1972; 107: 977-910.
2. Blandy J.P., Singh M. The technique and results of one-stage island patch urethroplasty.
Br J Urol 1975; 47: 83-87.
3. Leadbetter G.W., Leadbetter W.F. Urethral strictures in male children.
J Urol 1962; 87: 409-415.
4. Webster G.D., Robertson C.N. The vascularized skin island urethroplasty: its role and results in urethral stricture management.
J Urol 1985; 133: 31-33.
5. Andrich D.E., Mundy A.R. What is the best technique for urethroplasty.
Eur Urol 2008; 54: 1031-1041.