Summary.- *OBJECTIVE: We propose a modification to urethroplasty for stricture due to lichen sclerosus (balanitis xe-rotica obliterans).*

METHODS: We combine two-stage bucal mucosa graft and onlay ventral island flap.

RESULTADOS/CONCLUSIONES: This technique offers en-largement of the graft with the island flap and removal of the pa-thological skin.

Keywords: *Urethroplasty. Balanitis xerotica obliterans. Modification to Barbagli.*

Resumen.- *OBJETIVO: Proponemos una modificación a la uretroplastia en la estenosis que se asocia al liquen es-cleroatrófico (balanitis xerótica obliterante).*

MÉTODO: Combinamos dos técnicas (injerto de mucosa bucal en parche y colgajo ventral de piel proximal) en dos tiempos.

RESULTADOS/CONCLUSIONES: A la técnica de Barba-gli se une la ventaja de ampliar el parche con el colgajo ventral y el hecho de utilizar piel ventral proximal nos aleja de la zona afectada por la balanitis xerótica.

Palabras clave: *Uretroplastia. Balanitis xerotica obliterante. Barbagli modificado.*

Case Reports

Arch. Esp. Urol. 2009; 62 (5): 403-406

URETHOPLASTY IN BALANITIS XEROTICA OBLITERANS. TECHNICAL VARIATION

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Accepted for publication: July 30th, 2008.

INTRODUCTION

The balanitis xerotica obliterans is the sclerosus and atrofic genital lichen in the man. It is associated frequently to the fimosis and meatal stricture but sometimes exists also penis urethra stricture that seems related to the prolonged meatal stricture, reason why it is advised to repair this one the before possible thing. The simple meatotomy (hypospadia) is not sufficient when the stricture affects to subglandar urethra and this raises a technical challenge when not being able to use the local skin in form of flaps or grafts by the inflammatory phenomena that present. Ever since Mundy in 1994 advocates the use of the buccal mucosa for the reconstruction many works support this theory since the liken have not relapse in buccal mucosa.

Our contribution consists of the combination of the buccal mucosa graft and ventral island flap ventral in two stage that allow to solve complex cases and, to he himself time, to use the escrotal skin like cover to diminish the tensions in the zones of suture, being diminished the risk of fistulas.

MATERIAL AND METHOD

We report two patients with distal penis stricture by BXO, submissive regime of expansions during years (6-8 Fr), in which we resorted to a patch of buccal mucosa with reconstruction in a second time by means of proximal skin flap.

We don´t insist on the technique of obtaining of the mucous patch since she is the described one by its authors.

Surgical technique

We carefully prepared urethra washing it with antibiotic solution before beginning the first time and followed the indications of Barbagli: excision of the plate, glandular opening, suture of the patch to the albuginea and around urethral stomia, fixing it to the cavernous bodies and spongy part of the glans one with the purpose of creating a uretral plate. Finally fixation to the peneana skin laterally. We used reabsorbible suture (vicryl 4 or 5/0. For the correct immobilization of the graft we used suprapúbico catheter and smooth compresivo bandage of the penis during one week.

To the six months we made a second time, combining a Snodgrass (dorsal incision of mucosal patch) with a Mathieu (proximal flap of perimeatal base) if the proximal skin is undamaged, with which obtains the substitution of all the urethral circumference avoiding the tubularization of grafts that would have more possibilities of fistulas or stricture. The suture was made on 16 or 14 Fr tutor, having maintained a suprapúbico catheter in the postoperating one.

The tutor to the 15 days retires after to have closed suprapubic catheter. It is important that space between catheter and uretra exists since this avoids the infection.
The technique used by single us differs from the technique used by Barbagli in which this one tubuliza the patch to the six months and it makes it on catheter of foley of silicone of the 12 to favor the drainage of secretions.

RESULTS

Fistulas or strictures have not been developed both two years of the intervention. We did not include a case in which a meatal estricture forced to us to do meatotomy.
To both years of pursuit the mictional situation is stable without relapse of stricture. No has referred disfunction nor peneana deformity. Although, one is forms outposts of scleroatrofic lichen in which the penis presented one serious alteration from the aesthetic point of view before the urethral repair being high-priority to maintain the functionality from the mictional and sex life point of view.

DISCUSSION AND CONCLUSIONS

The oral mucosa is an excellent tissue of substitution when the local skin displays inflammatory alterations, being the technique combined with island flap of skin moved away of the inflammatory zone a valid alternative. The accomplishment in one or two times is reason nowadays for discussion but we followed the indications

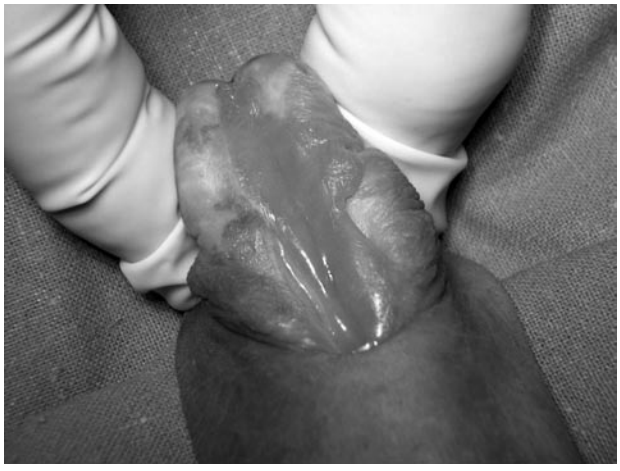

FIGURE 1. Mucosal buccal graft to the three months

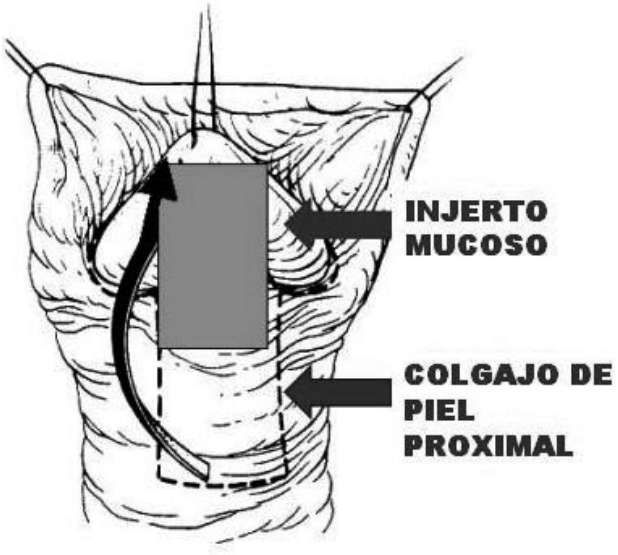

FIGURE 2. Modified scheme of Campbell who shows to the relation between the graft of buccal mucosa and ventral island flap.

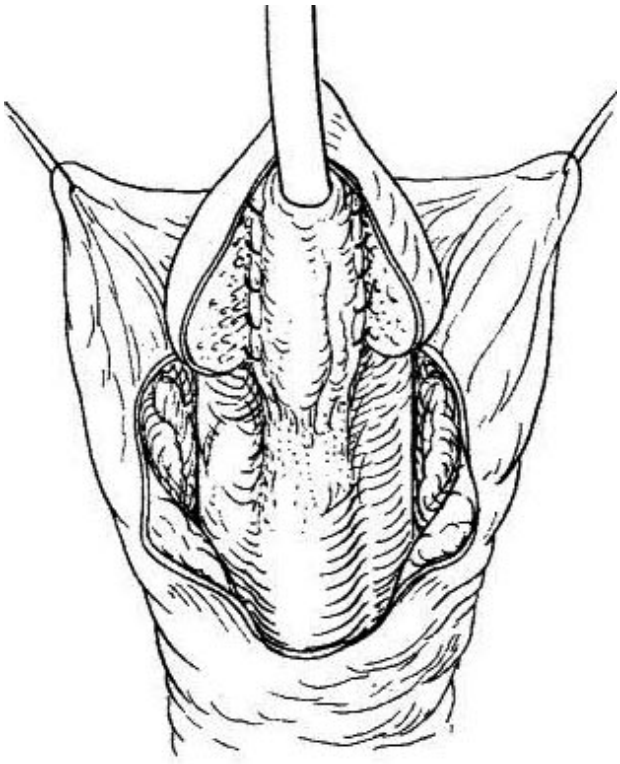

FIGURE 3. Escheme of suture of proximal flap on the graft (of Campbell).

of Barbagli, the technique in two times allows the repair us in cases in that the uretral plate cannot be used (or hipospadias insolvent or escleroatrófico lichen).

Our contribution is the combination of mucosal graft and proximal flap of meatal base with healthy skin what avoids excessive mobilization of the mucous graft.

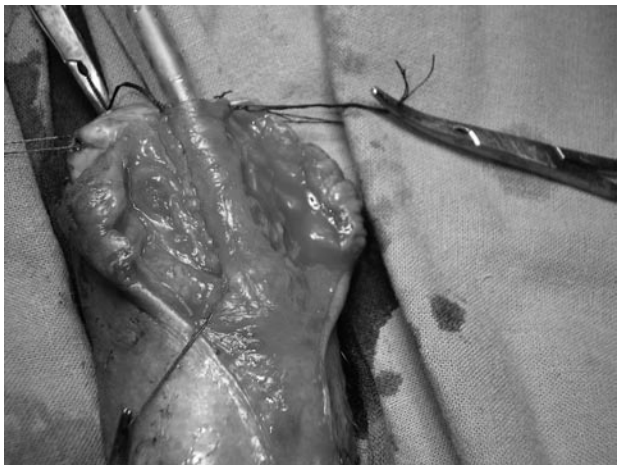

FIGURE 4.

We have found in Literature two references to the combination of graft of buccal mucosa and skin flap (Allen Morey and M Piana) being made in a single time, being the technique of Orandi the used one for the reconstruction. The technique in two times allows to assure the correct vascularitation of buccal mucosal graft. In addition, the technique Mathieu allows us to take moved away skin from the ill zone, with which the recidiva of the disease is less likely.

In our experience with the technique of Barbagli in penis urethra we have had certain difficulty at the time of placing the graft in the bed of the cavernous bodies due to the intercavernous furrow, that tends to fold the graft in the mean line. The immobilization of the penis by means of bandage allows to assure the vascularization.

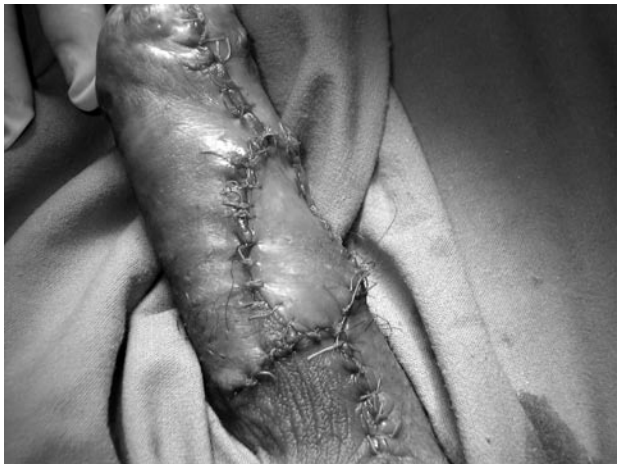

FIGURE 5. The cover of the suture with island flap of dartos avoids the tension.

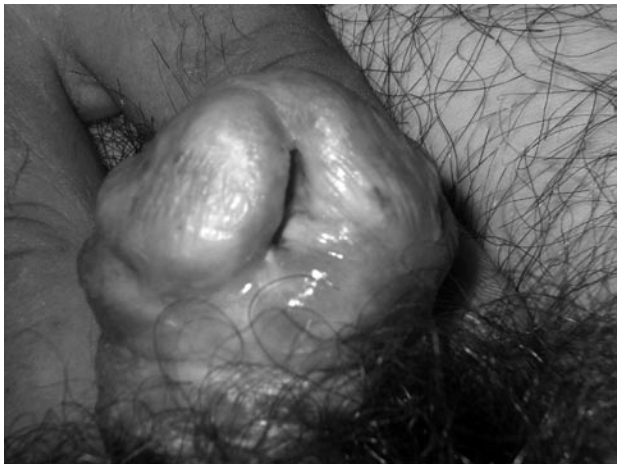

FIGURE 6. Detail of meato to the six months of the second time of intervention.

By another part, the partial erection during the intervention can cause folding of the graft in postoperating when taking place the flaccidity although this problem we have stated it in case of free grafts of skin of thigh and not in cases of buccal mucosa.

This technique can be also applied to hipospadias of adult with corda not corrected in the childhood, in where the ventral mobilization produces loss of the uretral plate. This way the alignment of the penis without making dorsal plicatura is obtained.

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