

THE SANDWICH TECHNIQUE FOR VACUUM-ASSISTED WOUND DRESSING APPLICATION IN THE UROGENITAL REGION: A SAFE, TIME-SPARING AND RELIABLE METHOD

Ooi and Chong⁽¹⁾ reported on their management of Fournier's gangrene with a multidisciplinary approach and the use of adjuncts such as vacuum-assisted wound closure. Staged surgical procedures, such as in the management of Fournier's gangrene, often require temporary coverage of extensive defects. For this, vacuum-assisted wound closures (VAC) have been proven to be effective and are widely utilised in surgery, but there is a paucity of literature on their application in urological regions.⁽²⁻⁴⁾ This is not surprising given that effective placement of VAC devices in the perineum can be technically challenging and difficult. Having faced a similar problem, we developed a safe, time-sparing and reliable method of VAC-application in the urogenital region, which we think is worthwhile sharing by an illustrative case.

A 48-year-old male patient was referred to our department with typical clinical signs of fulminant Fournier's gangrene of the perineum and genitalia due to an underlying hidradenitis suppurativa. Following radical surgical debridement of necrotic tissue, a large scrotal and perineal tissue defect with exposed testicles was encountered. For further wound consolidation, the wound was initially dressed with saline-soaked gauzes. The patient returned to the operating room 48 hours later for further inspection and debridement. Two days later, since there was no further evidence of active infection, the wound was copiously irrigated and a temporary VAC device (Kinetic Concepts Inc, San Antonio, TX, USA) was placed. Prolene sutures (size 2-0) were placed in the most caudal portion of the wound and the left inguinal fold, approximating the skin for easier VAC application.

A medium-size sponge was cut to the size of the perineal defect and two incisions were made bilaterally to bed the spermatic cords into the incisions (Fig. 1a). Thus, compression of the spermatic cord and vascular impairment was prevented. Sponge fixation was realised using a stapling device. Two additional sponges were taken and in each, a small cavity was shaped (Fig. 1b). Following testicle dressing with Mepitel® (Mölnlycke Health Care, Göteborg, Sweden) (Fig. 2a), the two overlying sponges were stapled together, forming a sandwich containing the testicles (Fig. 2b). Finally, the vacuum tubing was conventionally adjusted with 125 mmHg of continuous suction (Fig. 3). Following five days of VAC therapy, defect coverage consisted of bilateral medial thigh lift, as described elsewhere.^(5,6) Sonographic evaluation revealed no evidence of vascular impairment of the testicles.

The sandwich technique for VAC dressing in the urogenital region is a quick, simple and reliable method, with no impairment of the testicular or spermatic cord perfusion. Furthermore, if repeated VAC changes are required, this technique aids to decrease anaesthesia time. Thus, we recommend this technique for VAC application in urological regions for its technical ease and superior outcome.

Yours sincerely,

Gabriel Djedovic, Timm O Engelhardt, Ulrich M Rieger, Gerhard Pierer, Peter Kronberger

Department of Plastic, Reconstructive and Aesthetic Surgery, Innsbruck Medical University Anichstrasse 35, A-6020 Innsbruck, Austria. timm.engelhardt@i-med.ac.at

REFERENCES

1. Ooi A, Chong SJ. Use of adjunctive treatments in improving patient outcome in Fournier's gangrene. *Singapore Med J* 2011; 52:e194-e197.
2. Cuccia G, Mucciardi G, Morgia G, et al. Vacuum-assisted closure for the treatment of Fournier's gangrene. *Urol Int* 2009; 82:426-31.
3. Tucci G, Amabile D, Cadeddu F, Milito G. Fournier's gangrene wound therapy: our experience using VAC device. *Langenbecks Arch Surg* 2009; 394:759-60.
4. Ozturk E, Ozguc H, Yilmazlar T. The use of vacuum assisted closure therapy in the management of Fournier's gangrene. *Am J Surg* 2009; 197:660-5.
5. Djedovic G, Rieger UM, Skradski V, Pierer G. Scrotal reconstruction by testicular apposition and wrap-around skin grafting. *J Plast Reconstr Aesthet Surg* 2011; 64:1392-3.
6. Rieger UM, Erba P, Pierer G, Kalbermatten DF. Hidradenitis suppurativa of the groin treated by radical excision and defect closure by medial thigh lift: aesthetic surgery meets reconstructive surgery. *J Plast Reconstr Aesthet Surg* 2009; 62:1355-60.



Fig. 1 (a) Presentation of the urogenital wound after positioning of a sponge with bilateral incisions to bed the spermatic cords. (b) Cavities were formed into two sponges.

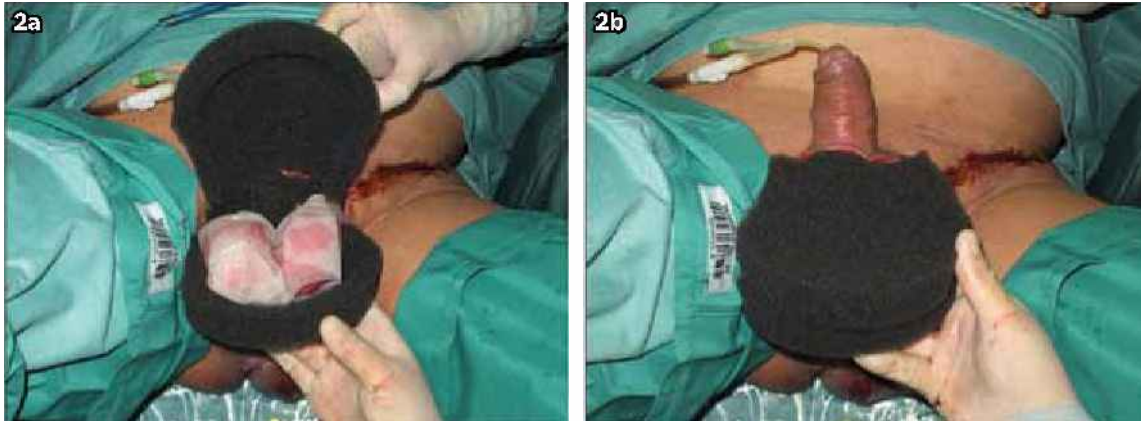


Fig. 2 (a) Testicles were dressed with Mepitel® and bedded into the cavities of the sponges. (b) The two sponges were stapled together, forming a sandwich containing the testicles.



Fig. 3 Final appearance of the vacuum-assisted wound dressing after application of the foil.