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NEW ENHANCEMENTS OF THE TRANSVERSE SCROTAL SURGICAL TECHNIQUE FOR PLACEMENT OF ARTIFICIAL URINARY SPHINCTER ALLOWS MORE PROXIMAL PLACEMENT OF CUFFS

Hypothesis / aims of study

Traditional artificial urinary sphincter (AUS) implantation requires placing the patient in lithotomy position with a perineal incision for cuff placement and a second incision above the inguinal canal for reservoir and pump placement. We believed AUS could be placed easier and quicker through one transverse scrotal incision. Most of the cuffs placed in the early days of this procedure were 4.0 cm. Questions about the efficacy of one transverse scrotal incision have focused on the frequency of 4.0 cm cuff placement. In an effort to effect more proximal placement of the cuff while keeping the advantages of the one scrotal incision technique, we report enhancements to the original technique resulting in increased use of 4.5 cm cuffs.

Study design, materials and methods

Initially, the surgeon was described as standing to the right of the supine patient. Now, the surgeon stands between the patient's legs and the patient's legs are gently flexed and mildly abducted. Apart from these positioning changes, modifications in the SKW Scrotal Retractor System (AMS) include the addition of two deep rake shaped retractors (Figure 1). Placing a rolled Raytec sponge under the rakes facilitates deep bulbar exposure. Even better depth of field can be obtained by then using a weighted vaginal speculum over the rakes (figure 2). Fifteen patients have been operated upon using the enhanced technique. Ten patients were first time implantations and five were revisions with three of the revisions having had the original AUS placed by traditional two-incision technique.

Results

Seven of 10 virgin AUS required dissection of the bulbocavernosus muscle prior to cuff placement and eight patients received a 4.5 cm cuff. On the two scrotally placed revisions, replacement cuffs (4.5 cm) were situated considerably proximal (4.5 & 7.5 cm) to the original cuff (4.0 cm) site. The three perineal placed revisions were accomplished through a scrotal incision with replacement of 2 cuffs (4.0 cm) in the same site and the other patient immediately distal (4.5 cm).

Interpretation of results

Since publication of the article 6 years ago describing the surgical technique of the transverse scrotal incision (1), the number of AUS in this country has almost tripled and almost 70% are now done through the new one-incision technique (2). Despite the popularity of transverse scrotal sphincters, there has been concern about its safety and efficacy (3). This new surgical enhancement allows more proximal cuff placement as evidenced by the bulbocavernosus dissection and use of larger cuffs.

Concluding message

New surgical techniques are works in progress. New positioning and exposure methods to the transverse scrotal incision technique of AUS allow more proximal cuff placement as evidenced by the bulbocavernosus dissection and use of larger cuffs. It is hoped utilization of these enhancements will encourage deeper cuff placement by transscrotal AUS surgeons and subsequent outcome studies will confirm a continence rate similar to the traditional surgical technique.

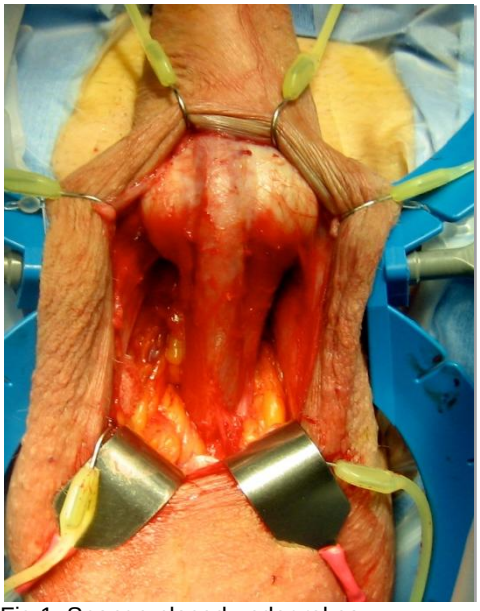

Fig 1: Sponge placed under rakes

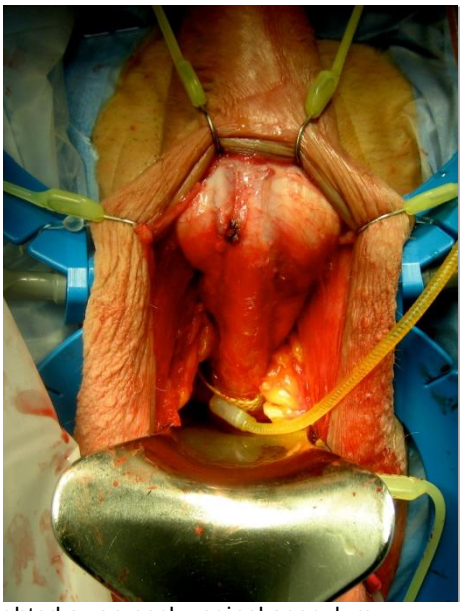

Fig 2: Weighted swan neck vaginal speculum

References

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2. Data obtained from Patient Information Forms from American Medical Systems
3. Myers JB, Flynn BJ. Modification of artificial urinary sphincter placement. Current Bladder Dysfunction Reports 3: 183-189, 2008

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Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**Patients were recruited and operated in " authors' private hospital"**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**