

## INSTRUMENTATION: PENILE RETRACTOR FOR URETHROPLASTY IN CHILDREN (OMEGA RETRACTOR)

PE Okoro

Department of Surgery, University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State.

Corrective surgery of the urethra of boys may be for conditions like hypospadias, epispadias, urethral injuries, strictures or fistulae. Successful correction of these conditions requires skills, experience and attention to fine details. Tissue handling must be gentle and placement of sutures accurate. (1) This is, particularly, important as the tissues used for repair are delicate and the penis is small and difficult to stabilize during surgery.

Surgeons operating on the male urethra have, over the years, sought to find ways to stabilize the penis, reduce bleeding and enhance outcome of penile surgery.(2,3,4) In my practice, I have devised a self retaining ring retractor for urethroplasty in male children. This device (Fig 1), constructed from a bucket handle is used to fix the penis by way of a stay suture at the glans and a tourniquet at the base of the penile shaft. (Fig 2) When this device is in place, it achieves stability of the penis as well as reduces bleeding during surgery.

During an 18 month period (June 2006-Dec. 2007), this device was used in operating on 22 children who required urethroplasty for various reasons. The age range was 8 months to 11 years. The indication for urethroplasty was hypospadias in 17 (77.3%), urethrocuteaneous fistula in 4(18.2%) and epispadias in 1 (4.5%) patient. During an average follow-up period of six months, 19(86.4%) patients had satisfactory result, 2 (9.1%) patients developed fistula and 1 (4.5%) patient had meatal stenosis.

This device appears to have enhanced the picture of urethroplasty in my practice in terms of reduction of bleeding, speed at surgery, and ultimate outcome. Consequently, I have commenced a randomized case controlled study to compare urethroplasty with and without this device. This is hoped to objectively evaluate the usefulness of this device and make appropriate recommendations.

In this experience, I noted that the material used tended to rust. I have resorted to stainless steel material for the construction of this device and same is recommended for any surgeon who may wish to use this device. In addition, application of this device on the penis must be gentle to avoid excessive stretching of the penis. Lastly, the basic principles of intermittent tourniquet application should be adhered to to avoid ischaemic injury to the penis.

Correspondence: Dr PE Okoro

Figure 1: Incomplete Ring with Grooves.



Figure 2: Penis Stabilized and ready for Surgery.



### REFERENCES

1. **Murphy JP.** Hypospadias. In: Ashcraft KW, (ed). *Pediatric Surgery*. 3<sup>rd</sup> ed. Philadelphia: WB Saunders; 2000;763-82.
2. **Ducket JW et al.** Hypospadias repair. In: O'Donnell B. (ed). *Pediatric Urology* 3<sup>rd</sup> ed. Oxford: Butterworth Heinman; 1997; 551-68.
3. **Redman JF.** Tourniquet as haemostatic aid in repair of hypospadias. *Urology*. 1986; 28: 241.
4. **Crawford DS, Blackburn AV, Ragoowansi R.** The penrose drain tourniquet for hypospadias repair. *Plast Reconstr Surg*. 2004;115:1525-6.
5. **Tsang TM, Stewart RJ.** The Denis Browne ring retractor in hypospadias surgery. *Br J Urol*.1995;76:510.