Knotting of Feeding Tube Used for Bladder Drainage in Hypospadias Repair

Sir,

Infant feeding tubes are commonly used for the splintage of the neourethra and continuous closed bladder drainage following urethroplasty. Over-catheterization with such thin tubes may result in its coiling and knotting. This is a preventable complication and timely recognition and proper management is essential to avoid further damage.

In a 5-year-old child who had undergone hypospadias repair, removal of an over-catheterized 6F infant feeding tube was met with resistance and required lubrication in-and-around the tube with 2% lignocaine jelly while maintaining a constant and gentle traction. The tube successfully removed was found knotted distally [Figure 1]. There was no bleeding or urethral disruption and the subsequent urinary stream was straight and thick.

Knotting is a known complication of placement of tubes in body cavities. Nasogastric tubes, ventriculoatrial catheters, ureteral stents, urinary catheters,[1] and urethral catheters used in hypospadias repair,[2] are all susceptible to knotting. An intravesically knotted tube may be removed by transurethral endoscopy, per urethrum following lubrication and gentle traction, or by suprapubic route. Transurethral endoscopic removal in the early postoperative period is contraindicated following urethroplasty due to the risk of neourethral disruption. In older children, feeding tubes of 6F or smaller may be removed gently per urethrum after meticulous lubrication as learnt from this experience. However, undue force during removal of knotted tubes can lead to serious iatrogenic injuries and must be attempted only by a senior surgeon. Timely suspicion is also important and an intravesical feeding tube that cannot be removed with ease should be considered as knotted and must be confirmed radiographically.

More importantly over-catheterization must be avoided to prevent both knotting and troublesome bladder spasms. Over-catherization can be prevented by adhering to the following steps during its insertion:

(i) once the tube is introduced into the bladder, slowly withdraw till the urine stops dribbling (now the tip of the feeding tube lies just distal to the internal sphincter);
(ii) pass the tube slowly in again till urine starts to reappear (tip is just proximal to the internal sphincter);
(iii) push the tube in a further 2-3 cms and anchor it at this position with the glans traction suture. Besides preventing knotting this also avoids troublesome bladder spasms and straining which results in seepage of urine around the feeding tube and wetting of the dressing.

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REFERENCES