

Intravesical knotting of feeding tube used as urinary catheter in an infant

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Abstract

Infant feeding tube is commonly used to temporarily drain the bladder in pediatric population. A case is described where the tube got knotted inside the bladder probably due to over insertion or bladder spasm caused by irritation of catheter.

Keywords

Infant feeding tube; intravesical auto knotting; over insertion; infant.

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Accepted for publication: 18 August 2016

Introduction

Feeding tube catheters smaller than 8F are commonly used as bladder catheters in neonates and small infants. Intravesical auto knotting of this feeding tubes is a rarely reported complication but it can cause significant morbidity [1]. The common factor in these patients was insertion of excessive length within the bladder [2]. Additionally, it has been suggested that knots occur when improper technique is used to insert and secure feeding tubes used

to drain the bladder [3]. We present an infant in whom a 6F feeding tube knotted in the bladder. The literature is reviewed, risk factors for knotting are discussed, and precautionary recommendations are presented.

Case Reports

A 57 day old male child was admitted and ventilated in Pediatric Intensive Care Unit (ICU) for pneumonia. The baby was catheterized with a 6 F infant feeding tube to monitor urine output. On day 3 while attempting to remove catheter there was resistance, the tip of catheter came out but the rest of the tube was stuck in the urethra [Fig. 1]. X-ray taken showed the catheter was bent with knot in distal urethra [Fig. 2].



Fig. 1. The tip of infant feeding tube seen folded on itself and protruding out of the urethra. Arrow shows a long length of tube (marking 15) inserted into the bladder.

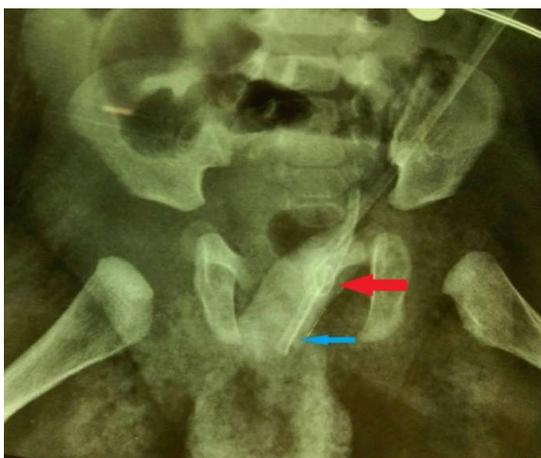


Fig. 2. Infant feeding tube seen in urethra with a bend and folded on itself (blue arrow) and a knot (red arrow) in distal urethra.

Lignocaine hydrochloride 2% jelly was injected into the urethra and with gentle continuous traction it was successfully

extracted. The tube was not only knotted but also bent and folded on itself and the knot was about 9 cms from tip of catheter. There was no bleeding per urethra during extraction and since then the baby is passing urine normally.

Discussion

Infant feeding tubes are commonly used as bladder drainage catheters especially in neonates and infants due to the difficulty in obtaining the appropriate size foley's catheter. Also because of the lack of balloon unlike a Foley's catheter, chance of overinsertion may be more likely. If an excessively long length is inserted it may get coiled in bladder and subsequently the coils may tighten to form a knot while applying traction to remove the catheter. Over distended bladder, excessive length of catheter (> 10cms beyond bladder neck) and smaller size (< 10 F) are considered as risk factors for knotting [4]. Bladder spasm is also attributed as one of the risk factor [5]. There are guidelines proposed to help prevent this complication by using the appropriate length based on sex, age and purpose [6]. Our case is particularly interesting because the tube was not only knotted but also folded on itself since the tip was protruding out per urethra (Fig. 1). The knotted tube can be removed by gentle traction after adequate lubrication like in our

case. Other options include radiological intervention with guide wire [5], transurethral endoscopy [7], vescicostomy or suprapubic cystostomy [4]. When using infant feeding tubes as catheters over insertion must be avoided by withdrawing the tube slightly after the urine starts dribbling. Once again slowly advance the tube only another few cms so the tip of the tube is just a few cms beyond the bladder

References

1. Khullar S, Bera MK, Kundu AK, Pal DK. Successful management of auto knotted intravesical infant feeding tube by minimal invasive technique. *J Indian Assoc Pediatr Surg.* 2012;17(4):174-5.
2. Foster H, Ritchey M, Bloom D. Adventitious knots in urethral catheters: report of 5 cases. *J Urol.* 1992;148(5):1496-8.
3. Pearson-Shaver AL, Anderson MH. Urethral catheter knots. *Pediatrics.* 1990;85(5):852-4.
4. Raveenthiran V. Spontaneous knotting of urinary catheters: clinical and experimental observations. *Urol Int.* 2006;77(4):317-21
5. Arda IS, Ozyaylali I. An unusual complication of supra-pubic catheterization with cystofix: Catheter

neck. Emphasis is on avoiding over insertion of infant feeding tubes if they are used as urinary catheter and the tube must be properly fixed and marked to prevent inadvertent advancement.

Acknowledgements

The author(s) declare that they have no competing interests and financial support.

knotted within the bladder. *Int J Urol.* 2001;8(4): 188-9.

6. Carlson D, Mowery B. Standards to prevent complications of urinary catheterization in children: should and should knots. *J Soc Pediatr Nurs.* 1997;2(1):37-41.
7. Dogra PN, Nabi G, Goel R. Endoscopic removal of knotted urethral catheter: a point of technique. *Urol Int.* 2003;71(1): 8–9.

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