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0196-0644/\$-see front matter

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doi:10.1016/j.annemergmed.2008.09.002



Figure 1. Abdominal radiograph.



Figure 2. Pelvic radiograph. Used with permission of Brendan J. Kilbane, MD, Department of Pediatrics, Division of Pediatric Emergency Medicine, Rainbow Babies and Children's Hospital, Case Western Reserve University School of Medicine, Cleveland, OH.

[Ann Emerg Med. 2009;53:e3-e4.]

An 8-month-old girl presented to the emergency department because of a retained urinary catheter. The patient had an 8-French feeding tube placed into her urethra and bladder as part of obtaining a voiding cystourethrogram. However, contrast could not be infused into the tube, and after multiple unsuccessful attempts to remove the tube, the patient was transferred to our facility. A radiograph was obtained to determine the location of the tube (Figures 1 and 2).

*For the diagnosis and teaching points, see page e4.
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DIAGNOSIS:

Knotting of a urinary catheter. The radiographs demonstrated that the tube was located in the bladder, with the end coiled into a knot. This rare complication has been reported with standard urinary catheters but appears to occur more frequently when feeding tubes are used for urinary catheterization.^{1,2} Feeding tubes are often more flexible and of greater length than urinary catheters. It has been proposed that these factors increase the risk that the tube will spontaneously coil on itself and then form a knot when it is pulled taut.

Several techniques have been used to facilitate the removal of a knotted tube or catheter from the bladder, including sustained traction, a guidewire, and suprapubic cystostomy. In our case, the urology service was consulted and a stiff guidewire was passed into the tube, causing the knot to uncoil and allowing the tube to be removed. Recommendations to prevent this complication include avoiding, if possible, the use of feeding tubes for urinary catheterization and inserting the tube or catheter to a predetermined and age-appropriate length.³

REFERENCES

1. Kanengiser S, Juster F, Kogan S, et al. Knotting of a bladder catheter. *Pediatr Emerg Care.* 1989;5:37-39.
2. Arena B, McGillivray D, Dougherty G. Urethral catheter knotting: be aware and minimize the risk. *CJEM.* 2002;4:108-110.
3. Carlson D, Mowery BD. Standards to prevent complications of urinary catheterization in children: should and should-nots. *J Soc Pediatr Nurs.* 1997;2:37-41.