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# Lower urinary tract obstruction caused by *fibroepithelial polyp* in a newborn boy

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ABSTRACT

In this rare case we report a 3-week-old boy with postnatal continues stomach pains, crying and severe dysuria, caused by bladder outlet obstruction due to a histopathological confirmed fibroepithelial polyp in the prostatic urethra. The condition was diagnosed and fully treated with ultrasound and a therapeutic cystoscopy.

## 1. Introduction

Congenital lower urinary tract obstruction is assessed to be present between 2.2 and 3.3 of 10,000 newborns. The most common causes of bladder outlet obstruction in children are due to phimosis, congenital posterior urethral valves, meatal stenosis, urethral diverticulum or caecoureteroceles.[1–3] Obstruction caused by fibroepithelial urethral polyps are extremely rare.[4]

The presence of genitourinary polyps is usually discovered before the age of ten and they are not known to have a malignant potential. They can be found in both the upper and lower urinary tract, with posterior urethral and bladder polyps mostly being found in children.[4,5]

## 2. Case presentation

A 3-week-old male patient is brought to the pediatric outpatient clinic by concerned parents reporting that the patient is crying every time when passing urine.

The patient was born vaginally at a gestational age of 38 weeks and 3 days of a mother with gestational diabetes and had a birth weight of 4.665 kg. There was a full Apgar Score and the patient passed meconium during birth. After 23 hours of observation, urine was passed.

The patient stayed 4 days at the hospital and was observed for what was described as myoclonic seizures, only seen by the mother. An ultrasound of the cerebrum was performed with normal findings, and the seizures stopped spontaneously. During the stay, many wet diapers were seen, and the patient was discharged with findings of normal blood sugar levels and was breastfed with additional formula supplement.

In the following weeks the patient was seen several times at the hospital. Weight gain and well-being was noted, but there was also complains of continues stomach-pains. Constipation was suspected due to the formula supplement and additional Lactulose was implemented. 12 days after birth the patient was only breastfed but was still reported having a big belly and stomach-pains, but normal stools. After 3 weeks the pattern was crying every time while passing urine and stool, and the urine was tested for infections and found negative. When examined both the genitals and anus were found to be normal.

An ultrasound examination of the urinary tract was conducted, finding an initially full bladder with a thickening of the bladder-wall and what appears to be an obstructing polyp close to the bladder neck. While voiding, a complete emptying of the bladder was noted but was observed ultrasonically to be disrupted many times by the polyp. No dilation of the upper urinary tract was seen.

The patient was referred to evaluation at the department of pediatric surgery at the age of 6 weeks and a new ultrasound was conducted, confirming the initial findings (Fig. 1.). The next day a cystoscopy was preformed, where a 1 cm stalked droplet-shaped polyp placed in the prostatic urethra proximal from the verumontanum at the 6 O'clock position was found (Fig. 2.) The bladder was found with a hypertrophic urothelium, both otherwise normal. The polyp was removed in toto at the stalk with a grasper and there was no subsequent bleeding (Fig. 3.). The polyp send to histopathological evaluation. Perioperative antibiotic

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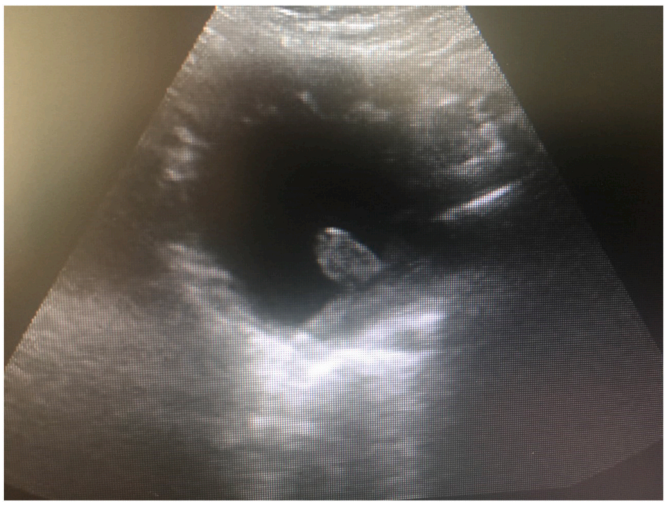

**Fig. 1.** Ultrasound Picture showing a 1 cm polyp in the bladder.

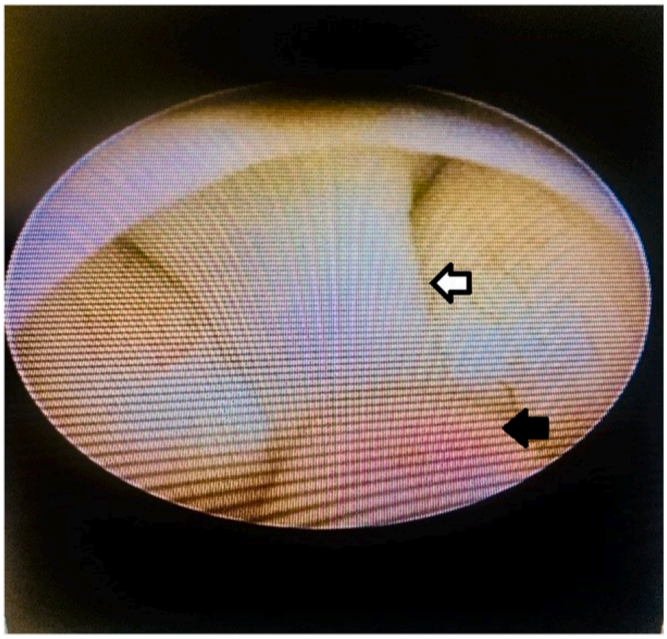

**Fig. 2.** Cystoscopy photo in the prostatic urethra near the verumontanum (Black arrow) displaying the stalk (white arrow) of the droplet shaped polyp obstructing the bladder neck.

was given. A silicone catheter was inserted and removed the next day. Afterwards several postvoiding assessments was conducted with ultrasound, and with very few ml. of residual-urine measured. Histopathological evaluation of the polyp found it to be a *benign fibroepithelial polyp*. The boy was discharged and no pains or other symptoms were stated, both at the 3 or 6 months follow-up, together with normal ultrasonic findings of the upper and lower urinary tract.

## 3. Discussion

Bladder outlet obstruction in neonates caused by an obstructive fibroepithelial polyp in the prostatic urethra is very rare. The etiology is not known, but one hypothesis is a developmental error in the invagination process of submucous glandular material of the inner zone of the prostate gland, an abnormal protrusion of the urethral wall or epithelial changes secondary to maternal estrogen.[3]

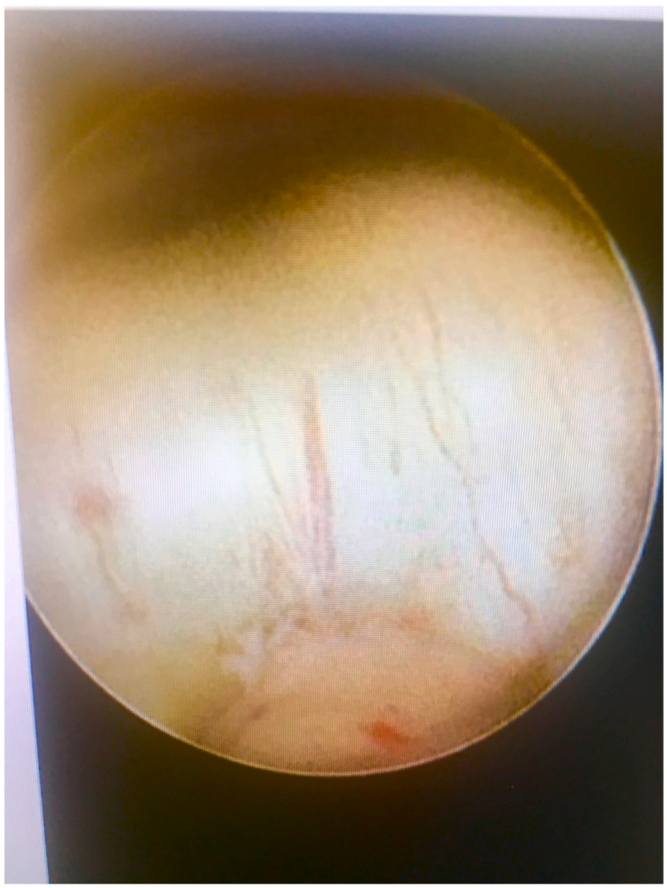

**Fig. 3.** Cystoscopy photo showing the prostatic urethra, taken shortly after total removal of the polyp.

This case demonstrates, that a neonate with findings of a large belly, dysuria and crying when passing urine and not suspected constipating stool, could be symptoms of a bladder outlet obstruction and should rapidly lead to further assessment, like an ultrasonic evaluation of the urinary tract. A cystourethrogram could be a diagnostic tool of pathology in the prostatic urethra, but as this case demonstrates, ultrasound being a noninvasive and no radiational-modality, follow by a diagnostic and therapeutic cystoscopy could be the choice of treatment. In this case the polyp was easily removed in toto with a grasper, but transurethral resection could also be used.

## 4. Conclusion

In cases of neonates presenting with symptoms of abdominalia together with dysuria, an accelerated diagnostic ultrasound, to confirm a possible presence of bladder outlet obstruction, should always be conducted.

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