A 10-cm big stone formed in ileal conduit six years after cystectomy

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INTRODUCTION

For many years ileal conduit (IC) has been considered the standard urinary diversion for bladder cancer patients submitted to radical cystectomy (RC)¹. Due to relative simplicity of the surgical technique, acceptable complication rate and postoperative quality of life, IC can still be considered an appropriate surgical solution after RC in most patients. However, although technically simpler to perform than continent reservoirs, IC has not been associated with lower complication rates².

The most common complications are urinary obstruction and stasis, chronic urinary infection and metabolic disturbances. Relatively rare complications appear as a result of chronic urinary infection and irritation and these are epithelial metaplasia and squamous cell cancer.

The occurrence of stone within IC, have been reported in many published studies, although the large stones, bigger than 10 cm in diameter are very rare³⁻⁴. In this issue, 10-cm large stone formed in IC six years after cystectomy is presented.

CASE REPORT

A 69-year-old man had undergone RC and IC in 2006, for muscle-invasive transitional cell carcinoma (TCC) of the urinary bladder. After five years after RC, he missed routine urological controls and, six years after surgery, he visited the urologist, because he had seen the large stone emerging from the urinary stoma. Previously, he had light pain at the stoma site and intermittent appearance of the cloudy urine.

On physical examination, he had peristomal irritation with erythematous peristomal skin. The part of whitish, solid stone was clearly visible in the stoma (Figure 1). Abdominal ultrasonography demonstrated bilateral ureterohydronephrosis of the moderate degree, dilated distal part of the conduit and the stone in the proximal part (Figure 2). The largest diameter of the stone was 9.7 cm.

The plain kidney-ureter-bladder (KUB) radiograph showed the large stone in the right iliac region (Figure 3). Under the general anesthesia, the stone was grasped with Kocher forceps, gently rotated and removed (Figure 4).

After the stone extraction, small bleeding appeared from the stoma. The conduit was irrigated with Povidone iodine solution.

The patient was discharged on the second postoperative day in good condition, with antibiotic prophylaxis. On the control, after two weeks, the urine was clear and urine culture sterile. The degree of ureterohydronephrosis decreased. The conduit was carefully inspected with cystoscope, and only the signs of chronic inflammation were seen. The chemical analysis proved the presence of calcium-phosphate in the stone.

DISCUSSION

The formation of stone in the IC is the consequence of various factors.
The most important are urinary obstruction and infection, the presence of intestinal mucus and metabolic disturbances. In addition, bad stoma care and the stasis of the urine and mucus are responsible for inflammation, infection and more serious complications.

The majority of patients with the stone in IC can be treated with minimally invasive techniques. Manual extraction is recommended for smaller stones, while larger usually require extracorporeal shock-wave lithotripsy (ESWL) and endoscopic approach. Open surgical removal is indicated only exceptionally.

In this case, manual extraction of the 10-cm large stone was successful and without complications.

**SUMMARY**

Prikazan je slučaj velikog konkrementa nastalog u ileal konduitu i način njegove ekstrakcije. Radi se o pacijentu starom 69 godina kod koga je pre 6 godina uradjena radikalna cistektomija i ileal konduit urinarna derivacija zbog karcinoma mokraće bešike.
Poslednjih godinu dana nije bio na kontroli kod urologa. Osećao je samo bolove slabijeg intenziteta u predelu stome i imao zamućen urin.

Prilikom fizikalnog pregleda vizuelizuje se deo konkrementa koji viri iz stome i eritem oko kože. Ultrazvučnim pregledom se otkriva konkrement u proksimalnom delu i staza urina u distalnom delu konduita i obosstrana ureterohidronefroza slabijeg stepena. Na nativnoj radiografiji se videla krećna senka prečnika 9,7x4,5 cm u desnom iliijačnom segmentu u projekciji stome.

U uslovima opšte anestezije kod pacijenta u dorzalnom litotomskom položaju posle parenteralnog davanja antibiotika uradjena je manuelna ekstrakcija konkrementa. Konkrement je prvo uhvaćen instrumentom (Kocher), a zatim rotirajućim pokretima ekstrahovan u celini. Posle ekstrakcije se pojavilo samo kratkotrajno krvarenje iz stome.

Pacijent je otpušten kući drugi postoperativni dan uz peroralnu antibiotsku terapiju. Dve nedelje posle intervencije imao je bistar urin sa sterilnom urinokulturom i diskretnu obostranu ureterohidronefrozu. Endoskopskim pregledom konduita nadjeni su znaci hronične inflamacije bez znakova tumora. Hemiskskom analizom konkrementa je otkriven kalcijum fosfat.

Naša tehnika manuelne ekstrakcije velikog konkrementa iz ileal konduita kod pacijenta u opštoj anesteziji se pokazala uspešnom, sa brzim oporavkom pacijenta i bez propratnih komplikacija.

Ključne reči: ileal kondjuit, radikalna cistektomija, komplikacije, kamen u kondjuitu

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