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**Plasenta akreata cerrahisinde tesadüfen saptanan idiopatik megaureter****Idiopathic megaureter incidentally detected during placenta accreta surgery**ALEV ESERCAN<sup>1</sup>EMRE EKMEKÇİ<sup>1</sup>TUNCER BAHÇEÇİ<sup>2</sup> Orcid ID:0000-0002-6215-6532 Orcid ID:0000-0003-2494-3073 Orcid ID:0000-0002-3178-9169<sup>1</sup> Sanliurfa Education and Training Hospital, Obstetrics and Gynecology<sup>2</sup> Sanliurfa Education and Training Hospital, Urology**ÖZ**

Üreter varyasyonları sıkça görülmekte olup, en sık çeşidi çift üreterdir. Nadir bir çeşit olan genişlemiş üreter 'megaüreter' olarak tanımlanmaktadır. Primer veya bir anomalije bağlı olarak sekonder olabilir. Primer megaüreterin ana nedeni fonksiyonel olmakla birlikte sekonder tipi ise anatomik bir darlık nedeniyle veya mesaneden idrar akışına doğuştan gelen subvezikal engel nedeniyle olmaktadır. Bu vakamızda, 35 yaşında plasenta akreata spektrumlu ve 5. sezaryenini olacak bir kadını sunduk. Sezaryen histerektomi yapıldı ve cerrahi sırasında retroperitoneal alan kontrolünde sağ üreterin ciddi şekilde dilate olduğu gözlemlendi. Üreter dilatasyonu araştırıldı ve idiopatik olduğu tespit edildi. Sonuç olarak, major jinekolojik cerrahilerde üreterler mutlaka kontrol edilmeli ve dilate üreterin her zaman iyatrojenik bir komplikasyon olmadığı unutulmamalıdır.

**Anahtar kelimeler:** Üreter, plasenta akreata, sezaryen histerektomi**ABSTRACT**

As ureter, variations can be seen common, and the most common type is duplication. A rare variation is widening of the ureter, which is defined as 'megaureter'. It can be primary or secondary to an abnormality. The leading cause for primary megaureter is functional, while for the secondary is an anatomical narrowing or an inborn subvesical obstacle to urine flow from the bladder. In this case, we presented 35 years old woman diagnosed with placenta accreta spectrum and fifth cesarean section. We performed a cesarean hysterectomy, and during the surgery, it was observed that the right ureter was severely dilated during the retroperitoneal control of the surgery area. Dilatation of the ureter was evaluated, and it was diagnosed as idiopathic. In conclusion, despite ureters being checked during major gynecological surgeries, detecting a dilated ureter during surgery does not always mean an iatrogenic complication.

**Keywords:** Ureter, placenta accreta, cesarean hysterectomy**INTRODUCTION**

Ureter derives from Wolffian mesonephric duct, and various malformations of ureters may be seen during the development. The most common type of ureteral variation is the duplication of the ureter. Non-physiologic widening of ureters starting from the renal pelvis or ureter as a whole is called a 'megaureter'. In terms of definition, if the diameter of the ureter is wider than 8 mm, it is defined as abnormal(1).

Megaureter may be primary or secondary to an abnormality. The leading cause of primary megaureter is a functional barrier of the terminal ureter. The ureter is wide enough, but its rigid wall prevents the transfer of peristaltic waves and, therefore, urine to the bladder. The etiology for secondary megaureter is an anatomical narrowing of the terminal segment of the ureter

or an inborn subvesical obstacle to urine flow from the bladder(1).

The incidence of megaureter is 23% in children with urinary tract obstruction. It is more common in boys than girls and is more common on the left side(1). Despite a high frequency in some families, no clear genetic inheritance pattern is detected. Although some children get symptomatic in childhood and malformations may be detected by radiologic methods, some variations can be detected in adulthood.

In this case, we presented a megaureter in a woman diagnosed incidentally during cesarean hysterectomy for placenta accreta surgery. Written and verbal consent was obtained from the case for publication.

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## CASE REPORT

A thirty-five-year-old woman was diagnosed with placenta accreta spectrum and fifth cesarean section. The patient was under close follow-up during her pregnancy, and it was planned to deliver the baby at 35. week of pregnancy. She didn't have any urinary symptoms or hematuria during pregnancy. So, she did not have urinary system evaluation during pregnancy either.

The patient underwent surgery at 35- weeks of gestation. The placenta was adherent to the myometrium and reached serosa during the surgery. After delivering the fetus from a fundal incision and clamping the umbilical cord, we decided to undergo a cesarean hysterectomy. As blood loss will be more than estimated, we planned to ligate the hypogastric arteries bilaterally. Bilateral hypogastric arteries were ligated bilaterally, and hysterectomy was completed uneventfully. After completing the hysterectomy, it was observed that the right ureter was severely dilated during the retroperitoneal control of the surgery area. The right ureter was dissected up to the renal pelvis, as this appearance alerted us about an iatrogenic ureter ligation. It was observed that the right ureter was severely dilated at the upper 2/3 level starting from the right renal pelvis. However, the ureter was in the usual impression in the end 1/3 part. The ureter was normal in size at the uterine right uterine artery ligation site. A urologist was invited to the operation. The left ureter was also dissected totally up to the ureteropelvic junction(UPJ), and the left side was normal. However, the right ureter was dilated (megaureter) approximately up to 5cm, and the right ureter was folded with the serosa incidentally at the end of the dilated ureter. The ureter was in normal appearance at the distal of this fold. The obstructed proximal part of the ureter was palpated through the UPJ, and no urinary stone or any formation resulting from obstruction was detected (Figure 1).

**Figure 1:** Megaureter



Asterisk: ureteral fold ; Arrow: distal side of obstruction

Cystoureteroscopy was performed, and the folded area of the right ureter was freed with the help of an inserted and placed double-j stent. Also, no etiologic factor has not been detected during cystourethroscopies like tumors or stones. A double-j stent is removed postoperative 6. weeks. Urinalysis and urine culture was normal.

## DISCUSSION

Iatrogenic ureteral injuries are not expected. However, especially during abdominal hysterectomy, It is an important complication of gynecological procedures(2). Ureteral injuries usually occur in the distal ureter and are a result of incorrect suturing. About 10% of ureteral injuries are bilateral and result in anuria. There is no consensus on whether cystoscopy should be performed after all major gynecological procedures. Immediate recognition and early repair of ureteral injury reduces possible complications and provides good results from treatment(3, 4).

While adult patients with megaureter are described as symptomatic by Hemal et al. (5) according to a series of 55 patients, Tatlisen and Ekmekcioglu (6) also described patients with flank pain. In our patient, a megaureter was discovered incidentally intraoperative. She did not have any urinary symptoms, and her urinary flow was normal.

In contrary to the pediatric group of patients with megaureter, in the adult group, if renal functions deteriorate, invasive procedures such as ureteral neocystostomy (open or laparoscopic) and endoscopic endoureterotomy (electrocautery or laser), and nephrectomy for non-functioning units are advised(5). However, our patient's renal function was normal, so we did not perform an invasive procedure, followed by a double J stent uneventfully.

Detection of a dilated ureter during a major gynecological surgery, which put us on alert in this surgery, made us nervous about a ureteral injury. However, after dissection of all parts of the ureter, the dilated part was not associated with an iatrogenic suturing.

In conclusion, ureters should be checked during major gynecological surgeries. However, detecting a dilated ureter during surgery does not always mean an iatrogenic complication. Ureters should be checked both endoscopically and with dissection in these cases.

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