

Dear Doctor,

Greetings from Micro Labs limited. We are happy to bring you **"NU Rounds"** which contains latest and interesting news in the field of Urology.

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Should you require any specific article or medical information, please feel free to contact us at medicalsolutions@microlabs.in

Looking forward to your valuable feedback

Best Regards,

Medical Team, Micro Labs Ltd

Case report of ureter obturator hernia and literature review analysis

Introduction

Ureteral obturator hernia a rare occurrence, usually found accidentally during imaging examinations or during surgery. Ureteral obturator hernia belongs to a category of ureteral hernia. Ureteral hernia can occur in the groin, femoral ring, ischial foramen, obturator and chest. Among them, ureteral hernia is extremely rare in the obturator position. The obturator is composed of the pubic bone and ischial branch. Most of the holes are occupied by a layer of membrane, with small holes on the caudal side to allow the passage of obturator veins, arteries and nerves. When the abdominal organs protrude through the obturator foramen of the hip to the femoral triangle (composed of the inguinal ligament, the inner edge of the adductor longus muscle, and the inner edge of the sartorius muscle), it is called an obturator hernia. Obturator hernia is a rare type of abdominal wall hernia with an incidence rate of 1 %. Once the ureter protrudes through the defect of the obturator foramen and cannot exit after entering the obturator tube, the ureteral hernia will occur into the obturator fora. We call it a “Ureteral obturator hernia”. Through searching historical documents, we found that there are only 2 reported cases of obturator hernia with ureteral compression. Here, we provide an interesting case of an elderly woman with obturator hernia and left ureteral compression.

Case presentation

A 67-year-old female patient admitted for “rheumatic heart disease combined with mitral stenosis and regurgitation” and underwent “mitral valve replacement” surgery. During the hospitalization, a computerized tomography (CT) scan of the chest and abdomen found that the left kidney and ureter had hydrops. Three months later, in order to treat left kidney and ureteral hydrops patient was admitted. Patient has no symptoms such as frequent urination, urgency, abdominal pain, hematuria, and dysuria. No history of prior abdominal surgery, trauma, or congenital defects. Local examination showed no bulge or percussion pain in both kidney area and bilateral ureters. Laboratory examinations revealed a decrease in the glomerular filtration

rate on both sides (70.15ml/min) and an increase in urine bacteria (7682.5/ μ L). For further understanding the degree of renal and ureteral hydrops, computed tomography (CT) scan of the urinary tract was recommended. The results suggested that her left kidney and ureter were still present. In order to clarify the cause of kidney and ureteral hydrops, CTU imaging of the urinary tract was performed, and it was found that the left ureter pelvis herniated into the parietal pelvic fascia was accompanied by tortuosity and left hydronephrosis. In order to assess the function of the kidneys, patient underwent nephro-dynamic imaging. The results suggest that the blood perfusion and function of the left kidney are slightly impaired, the excretion is significantly delayed, and the filtration rate of the left glomerulus is reduced (27.50ml/min); the glomerular filtration rate of the right kidney (38.60ml/min). The initial diagnosis was that the left ureter and hydronephrosis caused by pelvic perineal hernia, and laparoscopic exploration + tension-free repair of the left pelvic floor hernia was performed. Observation of the pelvic cavity revealed that the left obturator space became larger, the ureter passed through the obturator area, and the upper ureter was significantly dilated. Therefore, the diagnosis was changed to left obturator hernia with left ureteral hydrops and left hydronephrosis, and decided to perform left obturator hernia repair. The result of the operation was very successful. One week after the operation, patient had a follow-up visit. Colour Doppler ultrasound of the urinary system showed that the upper dilatation of the left ureter was better than before. And the patient is very satisfied with the treatment.

Urinary system CTU and three-dimensional reconstruction, suggesting tortuous hydronephrosis on the left ureter and hydronephrosis on the left



Conclusions:

Ureteral obturator hernia is an uncommon condition. The clinical symptoms are non-specific, including unclear abdominal pain, until the appearance of obstructive diseases of the urinary tract, such as renal insufficiency, urinary tract infection, kidney stones, and uremia. A comprehensive review of the literature shows that it is difficult to make an accurate diagnosis based on physical examination alone. Early urography can improve the possibility of accurate diagnosis. When a patient suffers from impaired renal function, timely surgical treatment can avoid deterioration of renal function.

Source: Hong Y, et al. Case report of ureter obturator hernia and literature review analysis. *BMC Urol.* 2021 May 29;21(1):86

Overall survival and adverse events after treatment with darolutamide vs apalutamide vs enzalutamide for high-risk non-metastatic castration-resistant prostate cancer: a systematic review and network meta-analysis

Introduction:

Based on statistical criteria, three prospective randomized controlled trials (RCT) testing apalutamide, enzalutamide, and darolutamide, have demonstrated an overall survival (OS) benefit for each of the three androgen receptor-axis targeted therapies (ARAT), relative to androgen deprivation therapy (ADT), in high-risk non-metastatic castration resistant prostate cancer (nmCRPC). Based on less mature follow-up than currently available, the findings of these three RCTs have been compared within five previous network meta-analyses (NMA). Of those, four addressed OS. Specifically, they relied on 18-month median follow-up for darolutamide, 20-month median follow-up for apalutamide, and up to 48-month median follow-up for enzalutamide. However, the most recent updates provide 52-month median follow-up for apalutamide, 48 median months for enzalutamide, and the 28-month median follow-up for darolutamide. These most current and most mature data have not been used to compare OS and/or adverse events (AE) related to the use of the three ARATs, relative to ADT.

Methods:

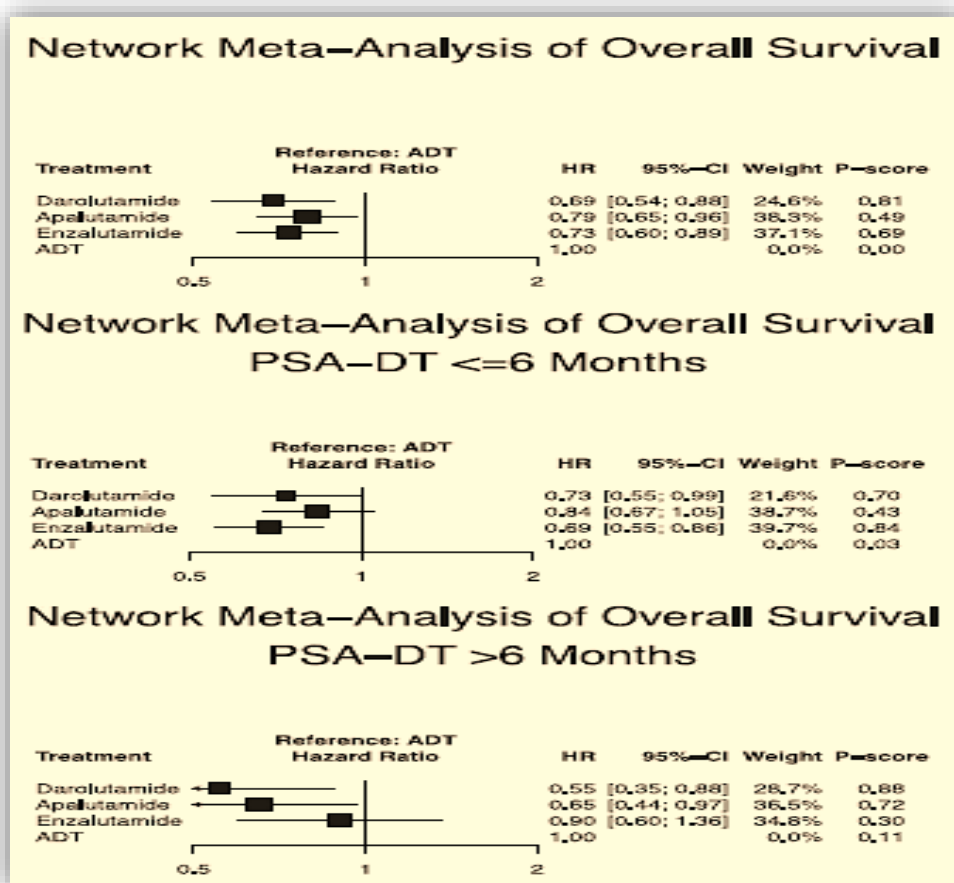
A systematic review and network meta-analysis focusing on OS and AE according to the most recent apalutamide, enzalutamide, and darolutamide reports. Systematic examination and comparison of apalutamide vs. enzalutamide vs. darolutamide efficacy and toxicity, relative to ADT according to PRISMA.

Results:

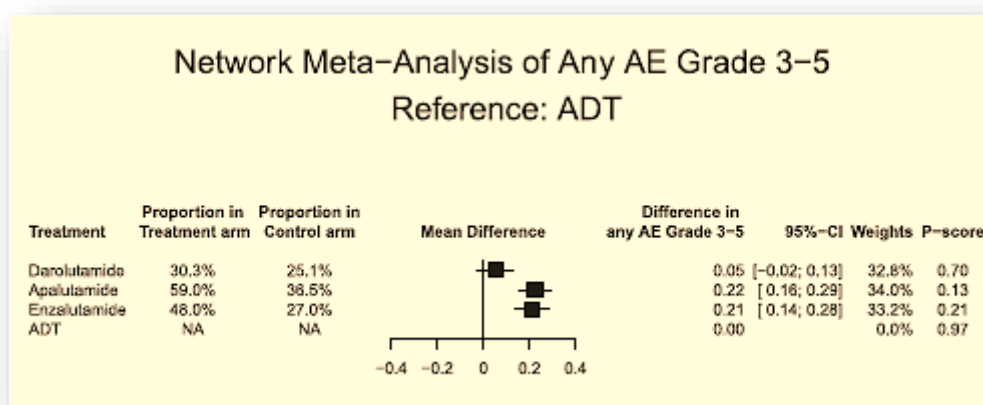
Overall 4117 observations made within the three trials that were analysed. Regarding OS benefit relative to ADT, darolutamide ranked first, followed by enzalutamide and apalutamide, in that order.

In the subgroup of PSA-doubling time (PSA DT) ≤ 6 months patients, enzalutamide ranked first, followed by darolutamide and apalutamide in that order.

In the subgroup of PSA-DT 6–10 months patients, darolutamide ranked first, followed by apalutamide and enzalutamide, in that order.



Regarding grade 3+ AEs, darolutamide was most favourable, followed by enzalutamide and apalutamide, in that order.



Conclusion:

The current network meta-analysis suggests the highest OS efficacy and lowest grade 3+ toxicity for darolutamide. However, in the PSA-DT ≤ 6 months subgroup, the highest efficacy was recorded for enzalutamide. It is noteworthy that study design, study population, and follow-up duration represent some of the potentially critical differences that distinguish between the three studies and remained statistically unaccounted for using the network meta-analysis methodology. Those differences should be strongly considered in the interpretation of the current and any network meta-analyses.

Source: Wenzel M, et al. Overall survival and adverse events after treatment with darolutamide vs. apalutamide vs. enzalutamide for high-risk non-metastatic castration-resistant prostate cancer: A systematic review and network meta-analysis. *Prostate Cancer Prostatic Dis.* 2021 May 30. Epub ahead of print. PMID: 34054128.

Can high-dose tranexamic acid have a role during transurethral resection of the prostate in large prostates? A randomised controlled trial

Introduction

BPH is a pathological condition that can lead to LUTS, which affect 50% and 90% of men aged 60 and ≥ 70 years, respectively. Different treatment options are available for BPH including watchful waiting, pharmacotherapy and surgical intervention. TURP is the surgical 'gold standard' treatment for BPH. The prostate has a rich blood supply and because of the hyperplasia haemorrhage is the most common TURP complication. Blood loss after TURP may be due to an increase in urinary fibrinolytic activity, which facilitates the lysis of clots. This rise is caused by urokinase release by the prostate, and also the urine and urothelium contain high concentrations of plasminogen activators that stimulate the fibrinolytic system. Therefore, administration of anti-fibrinolytic agents may be effective in reducing blood loss during TURP. Tranexamic acid (TXA) is a synthetic derivative of the amino acid lysine with anti-fibrinolytic effects. It blocks the interaction of plasminogen and plasmin on the surface of fibrin and prevents the proteolytic effect on fibrin, thereby preventing the breakdown of fibrin and stabilising the blood clots, so reducing blood loss. There is growing evidence that TXA is effective in reducing bleeding and transfusion rates in the cardiac, orthopaedic, gynaecological, transplant surgeries, and urological fields. However, to date, using high-dose TXA in the field of urology has not been studied well.

Objective: To assess the efficacy and safety of high-dose tranexamic acid (TXA) during bipolar transurethral resection of the prostate (B-TURP) in patients with large prostates compared to placebo.

Patients and methods:

Overall 204 patients with enlarged prostates and in need of surgical intervention were randomised into two groups. Group A underwent B-TURP and received TXA as an intravenous

loading dose of 50 mg/kg over 20 min before induction of anaesthesia followed by a maintenance infusion of 5 mg/kg/h until resection was completed. Group B (placebo) received a saline infusion of a similar volume.

Results: There was highly significant drop in haemoglobin in the placebo group at 4- and 24-h postoperatively compared with the TXA group ($P < 0.001$).

The change in Haemoglobin after 4 and 24 hours postoperatively and blood transfusion rate

Variable	Group		P
	TXA (N= 95)	Placebo (N = 91)	
Hb level, g/dL, mean (SD)			
Preoperative	13.12 (1.13)	12.59 (2.37)	0.052
4-h postoperative	10.67 (1.17)	9.09 (1.42)	0.001
24-h postoperative	10.29 (1.42)	8.91 (0.9)	0.001
Blood transfusion, n (%)			0.74
No	91 (95.8)	86 (94.5)	
Yes	4 (4.2)	5 (5.5)	

Perioperative data

Variable, mean (SD)	Group		P
	TXA (N = 95)	Placebo (N= 91)	
Irrigation fluid, L	19.21 (3.13)	23.05 (3.8)	0.001
Operative time, min	79.93 (22.18)	90.91 (21.4)	0.001
Weight of resected adenoma, g	55.15 (12.28)	51.47 (11.74)	0.038
Postoperative irrigation time, h	14.75 (5.15)	18.33 (5.96)	0.001
Catheterisation time, h	51.61 (6.92)	52.56 (7.9)	0.384
Hospital stay, h	55.92 (7.57)	56.85 (7.08)	0.388

No significant difference in the blood transfusion rate between the two groups with five patients (5.5%) in the placebo group and four (4.2%) in the TXA group requiring a transfusion ($P = 0.74$). The procedural time was significantly less in the TXA group vs the control group, at a mean (SD) of 79.93 (22.18) vs 90.91 (21.4) min ($P = 0.001$). Also, the intraoperative irrigation fluid volume and postoperative irrigation duration were significantly less in the TXA

group vs the control group, at a mean (SD) of 19.21 (3.13) vs 23.05 (3.8) L and 14.75 (5.15) vs 18.33 (5.96) h, respectively ($P = 0.001$).

Conclusion: High-dose TXA was effective in controlling blood loss during B-TURP in patients with large prostates, with no adverse drug reactions.

Source: Samir M, et al. Can high-dose tranexamic acid have a role during transurethral resection of the prostate in large prostates? A randomised controlled trial. June 2021;1-6



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