

Editorial comment to: Tortolero Blanco L, Rodriguez Socarras M, Fabuena Montero R, et al. Renal colic during pregnancy: Diagnostic and therapeutic aspects. Literature review. Cent European J Urol. 2017; 70: 93-100.

Ureteral obstruction in pregnancy – The “Stone Mountain” for the Urologist

Ewa Bres-Niewada

Department of Urology, Medical University of Warsaw, Poland

The management of ureteral obstruction in pregnancy remains controversial. Clinically oriented literature review on diagnostic and therapeutic decisions concerning renal colic in pregnancy has been published in this issue of the Central European Journal of Urology [1].

We all still face several challenges of differentiating renal colic in pregnancy caused by the urethral stone or by physiological hydronephrosis. Unfortunately, clinical signs and symptoms or laboratory tests are all of poor clinical value and cannot be used to figure out the reason for hydronephrosis. Also, pregnancy trimester is not associated with the specific pathogenesis. Physiologic hydronephrosis is more common and severe on the right side because of anatomical reasons (dextrorotation of the uterus, protection of the left ureter by the gas-filled sigmoid colon), while left-sided flank pain is significantly more characteristic for the lithiasis [2].

Ultrasound is widely accepted as a primary imaging modality for the pregnant patient with renal colic [3], although its sensitivity in detecting ureteral stones is not always satisfactory. In many individuals, hydronephrosis is easy to be detected, unlike its cause. It remains unclear whether inconclusive ultrasound should be followed by other imaging studies. It is rather not justified in uncomplicated stone patients with good pain control and no infection, as the majority of the stones will be passed spontaneously. Moreover, pregnant patients with renal colic caused by physiological hydronephrosis can be effectively managed conservatively (pain control, rest, body positioning contralateral to the pain or in the knee-elbow position) with no need for intervention. The obstetricians tend to overdiagnose hydronephrosis and expect treatment with the DJ stent in majority of cases. Certainly DJ stents are not without complications and can result in infections, stent intolerance and excessive encrustation. Furthermore, pregnancy related physiological changes in the urinary tract can

mimic ureteral obstruction and it should be pointed out that while occasionally detected on ultrasound and asymptomatic, the hydronephrosis does not require any specific treatment.

Complicated renal colic needs invasive treatment. Temporizing methods (DJ stent or nephrostomy tube placement) supporting drainage and relieving the obstruction are necessary in patients with secondary infection or sepsis. Refractory pain can be managed with the DJ stent or with ureteroscopy (URS). Large body of evidence, including systematic reviews and meta-analyses, support the use of URS as safe and successful first-line therapeutic method for symptomatic ureteral stones during all stages of pregnancy. Ureteroscopy can also be used as a diagnostic and therapeutic procedure for patients with hydronephrosis and ambiguous ultrasound findings, as it can help to visualize and remove the stones endoscopically or place the stent safely without fluoroscopy and blind maneuvers. Certainly URS is invasive and not harmless for the mother and the fetus, and so when invasive treatment is needed this is excused. The number of anaesthetic events and cumulative duration of anaesthesia time does not differ in women undergoing URS compared to patients managed with DJ stents [4]. Both procedures can be done safely under spinal anesthesia. URS-related urological complications rate is not increased in pregnancy as reported in present studies. Unfortunately, URS can result in obstetric complications, including preterm labour, as reported for 4% of patients [5], as renal colic mainly affects patients in second and third trimester. Consequently, the URS procedure should be serviced by an experienced urologist and accompanied by an obstetrician or midwife, only in high-volume centers.

To sum up, individualised approach and a multidisciplinary team composed of an urologist, radiologist, anesthesiologist and obstetrician is necessary for renal colic pregnant patients in a safe and effective trip “up and down the Stone Mountain”.

References

1. Tortolero Blanco L, Rodriguez Socarras M, Fabuena Montero R, et al. Renal colic during pregnancy: Diagnostic and therapeutic aspects. Literature review. Cent European J Urol. 2017; 70: 93-100.
2. Andreolu M and MacMahon R. Renal colic in pregnancy: lithiasis or physiologic hydrocephrosis? Urology. 2009; 74: 757-761.
3. Turk Ch, Petrik A, Sarica K, Seitz C, Skolarikos A, Straub M, Knoll T. EAU Guidelines on Interventional Treatment for Urolithiasis. Eur Urol. 2016; 69: 475-482.
4. Rivera ME, McAlvany KL, Brinton TS, Gettman MT, Krambeck AE. Anesthetic exposure in the treatment of symptomatic ureteral calculi in pregnant women. Urology. 2014; 84: 1275-1278.
5. Johnson EB, Krambeck AE, White WM, et al. Obstetric complications of ureteroscopy during pregnancy. J Urol. 2012; 188: 151-154. ■

Corresponding author

Ewa Bres-Niewada, M.D., Ph.D., FEBU
ewa.bres-niewada@wum.edu.pl