



# Recurrent Gestational Hydronephrosis



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## INTRODUCTION

- Renal Colic/symptomatic hydronephrosis is a rare urological pregnancy complication, with limited publications.
- This case provides awareness and adds valuable data to aid in future patient management.

## CASE

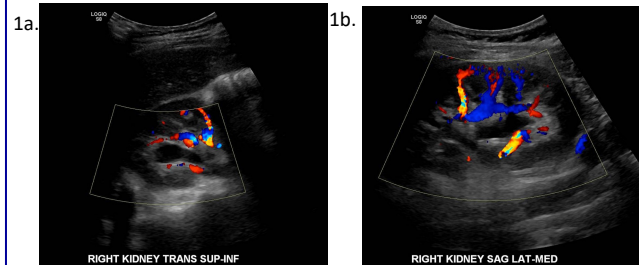
- 30 yo G2P2002 with recurrent right hydronephrosis
- G1, presented with renal colic requiring ureter stenting at 27 weeks gestational age (wga)
  - Replaced every 4-6 weeks
  - Nifedipine was required for preterm contractions
  - Uncomplicated SVD at 37+6wga
- G2, became symptomatic at 18 wga
  - initial treatment Tylenol and Flexeril
  - Required ureter stenting at 22wga
  - Renal ultrasound (US) showed grade 3 pelviectasis
  - Prophylactic Keflex required in 3<sup>rd</sup> trimester due to recurrent urinary tract infections (UTI)
  - Uncomplicated SVD at 37+6wga

## References

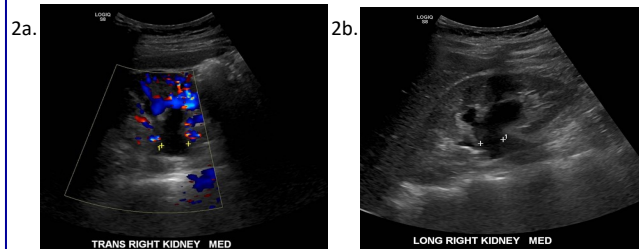
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## SCHOLARLY QUESTION

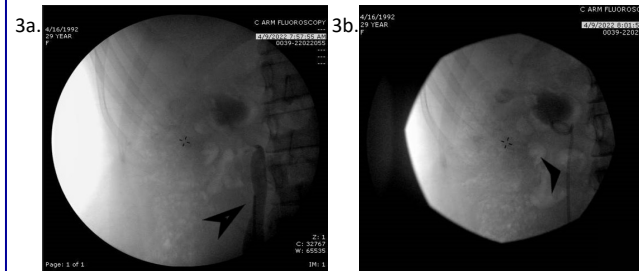
Is hydronephrosis of pregnancy an underreported and possibly treatable contributing cause of abdominal/flank discomfort in pregnancy?



1a-b: G1 31+5 wga R Kidney Ultrasound (US), mild-moderate hydronephrosis; 1a. R kidney US transverse; 1b. R kidney US sagittal



2a-b: G2 at 22 wga R Kidney US, mild-moderate hydronephrosis; 2a. R kidney US transverse; 2b. R kidney US longitudinal



3a-b: G2 at 22+3 wga cystoscopy, right (R) retrograde pyelogram, R ureteral JJ stent placement; 3a. Pre stent; 3b. Post stent

4: 5 month PP R kidney US, hydronephrosis resolved

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## DISCUSSION

- Asymptomatic pelviectasis affects 90% of pregnancies (1)
  - Kidney volume increases by 200-300ml (4)
  - Peak expansion noted by 28wga, resolving 4-6 weeks postpartum (PP) (4)
- Most commonly in:
  - Right kidney, primigravidae, second half of pregnancy and in multiparous (1)
  - Right kidney predominance due to uterine dextrorotation, left ureter protection from gas filled sigmoid colon, and engorged right ovarian vein draining into renal vein (2, 4)
- Causes:
  - Ureter compression and elevated progesterone (4)
- Risk factor for:
  - Asymptomatic bacteriuria (1)
  - Recurrent UTIs, pyelonephritis (40% increase), acute kidney failure, hydronephrosis, and renal colic (1, 4)
  - Increased risk of intrauterine infection, oligohydramnios, PIH, still birth, premature labor in the pregnant woman and to prematurity, anemia, congenital pneumonia, or sepsis in the child (1)
- Evidence based:
  - Grade 3 and/or 4 pelvicalyceal dilation increases the risk of asymptomatic bacteriuria (1)
  - Insertion of DJ stents were more effective than conservative therapy alone in moderate/severe hydronephrosis (2, 3)

## Conclusion

- Hydronephrosis of pregnancy as a cause of abdominal/flank pain in pregnancy is understudied.
- With significant risks associated with hydronephrosis, low cost/safety profile of renal US, and possibility of improving maternal/fetal outcomes, future studies to assess for this connection are needed.