

## Introduction

Family physicians must retain a high index of suspicion for appendicitis during the peripartum period, as labor may mask otherwise common features of appendicitis. Diagnosis is often complicated by:

- Increased variability of presentation of the pregnant patient compared to their nonpregnant counterparts [1,2].
- Limited use of CT, given potential risks of fetal radiation [3].
- Confounding signs and symptoms associated with pregnancy, particularly surrounding labor.

As pregnancy progresses, the developing fetus may displace the appendix (particularly in the third trimester) [4]. Labor pain itself can cloak pain associated with appendicitis, and both conditions can refer pain in similar distributions.

## Case Report

- 29 year old G8P2233 at 37w3d with uncomplicated medical and pregnancy history who presented to L&D triage with bilateral low back pain, right hip and groin pain, rigors, contractions every 3-5 minutes, and loss of fluid prior to arrival.
- Ultimately delivered a healthy female via vaginal delivery.
- The next 2 days, continued to complain of rigors and significant hip pain/numbness with radiation to groin and anterior thigh.
- CBC, CMP, and TSH showed WBC 12.5, Hgb 9.5, otherwise unremarkable.
- Exam: HR 105, otherwise normal vitals. Right ASIS point tenderness; no guarding, rebound, or McBurney's point tenderness.
- Discharged on PPD#2 at patient request in stable condition.
- Patient returned to our facility on PPD#7 with new fever and continued rigors, as well as RLQ, right hip, and anterior right leg pain.
- Vitals: HR 110, Temp 38.8 °C, otherwise unremarkable.
- CBC and CMP showed WBC 17.8, Hgb 8.9, otherwise unremarkable.
- CT abd/pelvis: 10 cm x 11 cm x 14 cm RLQ mass with extension into the anterior compartment of right thigh, suspicious for abscess/ruptured appendicitis.

## Diagnostic Imaging

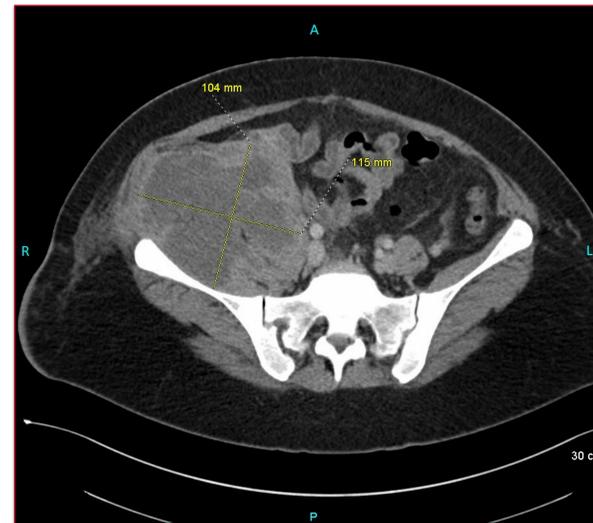


Figure 1: Large RLQ abscess on PPD#7

## Diagnostic Imaging

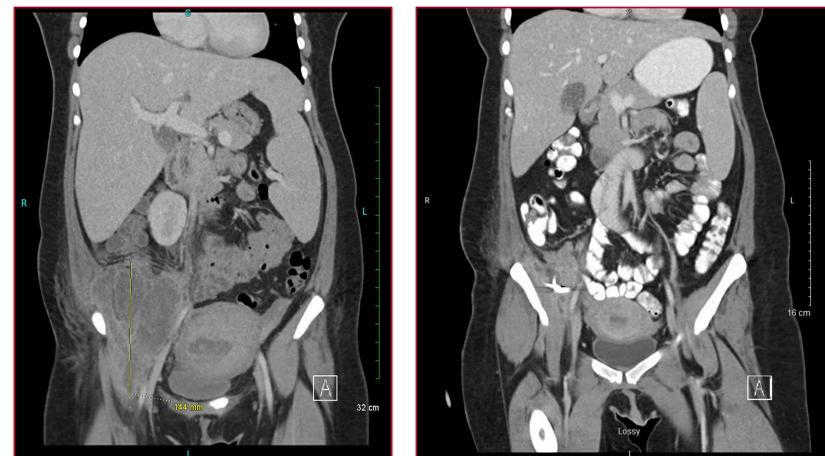


Figure 2: Coronal CT view on PPD#7

Figure 3: 1 month after treatment and drain

## Outcome

- Admitted on PPD#7. Treated with IV piperacillin/tazobactam and pain medications. General surgery and interventional radiology consulted.
- Percutaneous drain placed on PPD#8 by IR with large return of purulent fluid.
- Patient improved significantly over the next 2-3 days. Discharged home with drain in place and 7 day course of oral levofloxacin and metronidazole.
- Patient returned 12 weeks later for scheduled laparoscopic appendectomy.

## Discussion and Conclusions

- This case represented a delay in the diagnosis of appendicitis during labor.
- Several markers of appendicitis can appear similarly during labor, such as leukocytosis and tachycardia. Both of these were present.
- Several common features of appendicitis were notably absent in this case during labor, including pain migration, rebound tenderness, McBurney's point tenderness, and fevers. Fever was present at follow up on PPD#7, however.
- Anterior thigh numbness, tingling, and weakness likely due to abscess compressing on the sensory and motor branches of the right femoral nerve.
- Psoas and obturator tests were not performed during the peripartum period. In retrospect, these tests would have likely been positive, given the abscess size and location.
- Family physicians must retain a high index of suspicion for appendicitis during the peripartum period, as labor may mask otherwise common features of appendicitis.
- This case highlights the need for further investigation of potential markers that can lead to the more accurate diagnosis of appendicitis during the peripartum period.

## References

1. House JB, Bourne CL, Seymour HM, Brewer KL. Location of the appendix in the gravid patient. *J Emerg Med*. 2014 May;46(5):741-4.
2. Snyder MJ, Guthrie M, Cagle S. Acute Appendicitis: Efficient Diagnosis and Management. *Am Fam Physician*. 2018 Jul;98(1):25-33.
3. Expert Panel on Gastrointestinal Imaging. ACR Appropriateness Criteria® Right Lower Quadrant Pain-Suspected Appendicitis. *J Am Coll Radiol*. 2018 Nov;15(11S):373-387.
4. Pates J, et al. The Appendix in Pregnancy: Confirming Historical Observations With a Contemporary Modality. *Obstet Gynecol*. 2009 Oct;114(4):805-808.