



2017

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Narwal, Manpreet S.; Jevort-Eichorn, Susan; and Clair, Narinder Nina, "Acute Hypoxic Respiratory Failure as a Complication of a Urinary Tract Infection During Pregnancy: A Case Presentation" (2017). *Research Day*. 109.

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Acute Hypoxic Respiratory Failure as a Complication of a Urinary Tract Infection During Pregnancy: A Case Presentation



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Introduction

Urinary tract infections (UTI), as well as asymptomatic bacteriuria, have the potential to cause serious morbidity during pregnancy making it imperative to identify and treat them promptly. If left untreated, a UTI can lead to pyelonephritis and sepsis. More importantly, UTIs in pregnancy are independently associated with intrauterine growth restriction (IUGR), premature rupture of membranes (PROM), preterm delivery, pulmonary edema, acute respiratory distress syndrome (ARDS), preeclampsia, and cesarean delivery.

Hospital Course

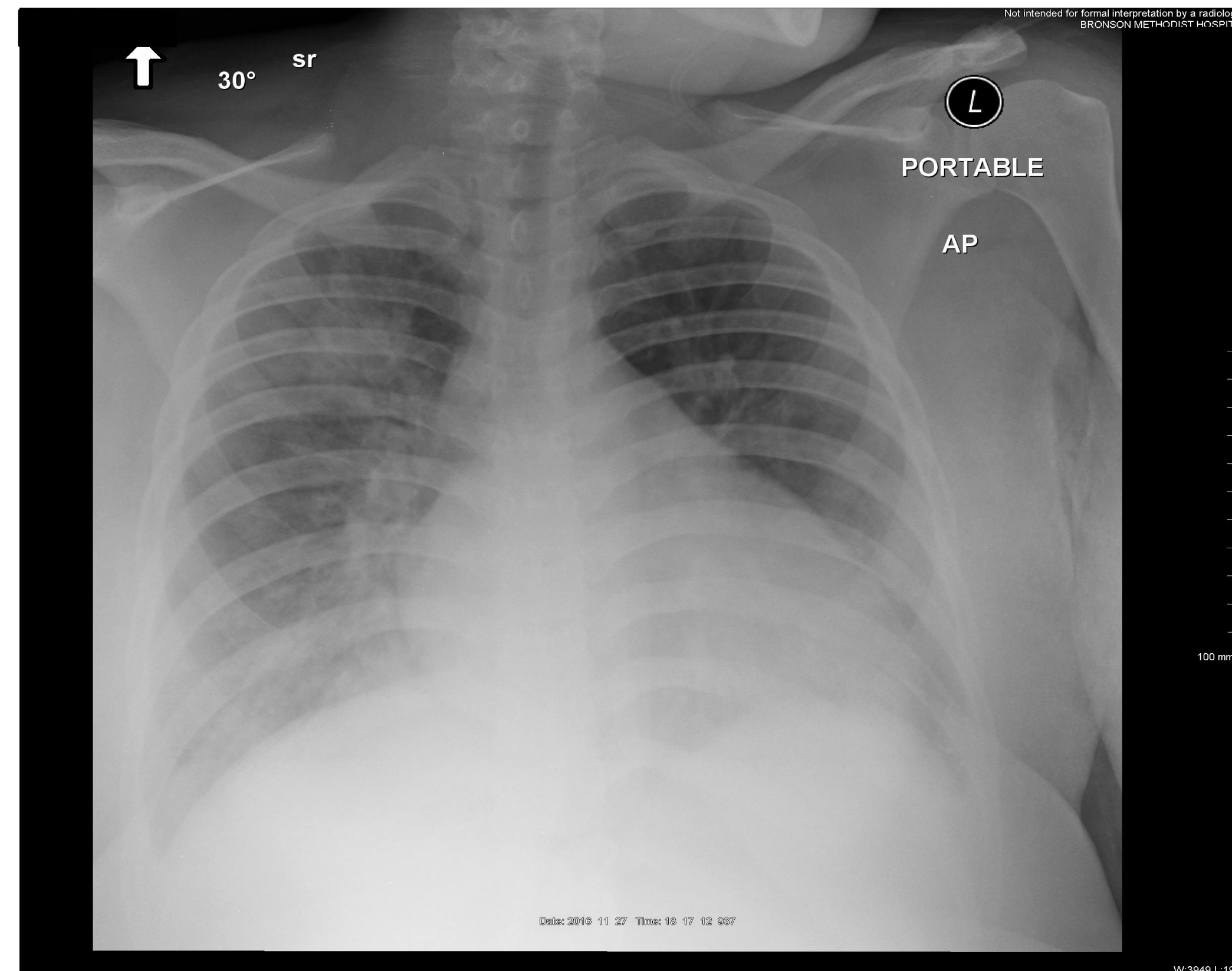
We report the case of NC, a 19 year old G1P0 at 36 weeks and 3 days GA who presented to the hospital with concern for rupture of membranes with associated back and abdominal pain. She was febrile to 100.3 and tachycardic on initial presentation. Her prenatal history was significant for recurrent E.coli bacteriuria and non-compliance with antibiotic therapy. The patient was started on broad spectrum

antibiotics. She progressed in labor and delivered a healthy female via vacuum extraction for non-reassuring fetal heart tones. Subsequently, blood cultures came back positive for E.coli. Her postpartum course was complicated by elevated blood pressures and proteinuria with concerns for pre-eclampsia. She received appropriate treatment with magnesium sulfate and anti-hypertensive therapy. Her clinical picture worsened with the development of hypoxemia and pulmonary

edema concerning for pre-eclampsia with severe features vs. ARDS from her bacteremia. She improved with aggressive diuresis and was discharged home in stable condition.

Discussion

Acute pyelonephritis secondary to ongoing UTI affects 1-2% of women and has, in some cases, been shown to increase the risk of pulmonary edema. In contrast, acute pyelonephritis in non-pregnant women is rarely associated with ARDS. In this case it is almost impossible to know whether the pulmonary edema was a manifestation of preeclampsia or ARDS from the UTI or a combination of both. Nonetheless, this case serves as a reminder of the importance of treating asymptomatic bacteriuria in pregnancy and the potential sequelae including preterm delivery, ARDS and preeclampsia. It is important that we, as physicians, continue to educate our patients about the importance of treating asymptomatic bacteriuria and UTIs in pregnancy given the morbidity associated with it.



X-ray from hospitalization