

A rare cause of pneumoperitoneum

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A 22-year-old female with no past medical history presented to the emergency department with a two-day history of diarrhea and left shoulder pain when lying down which was alleviated by sitting upwards. She had a blood pressure of 103/62, pulse rate of 78 beats per minute and a temperature of 36.6°C. Abdominal exam was unremarkable and the rest of the physical exam was within normal limits. A chest X-ray (Figure 1) was ordered due to the patient's complaint of shoulder pain which demonstrated apparent pneumoperitoneum. She was taken emergently to the operating room for operative management of a suspected bowel perforation. An exploratory laparotomy was negative for an intraperitoneal injury and attention subsequently turned to the free fluid in the posterior cul-de-sac. OB/GYN was called to the operating room and a 6 cm laceration in the posterior cul-de-sac was identified which

fully penetrated the vaginal wall. The laceration was repaired and the patient was discharged the following day. Upon further questioning, the patient admitted to recently having aggressive sexual intercourse with a new partner and it was since these encounters that her symptoms began.

In addition to the typical causes of pneumoperitoneum, there can be various forms of vaginal trauma due to coitus or intravaginal mechanical trauma including douching and postpartum exercises that can result in relatively asymptomatic pneumoperitoneum.¹⁻³ Regardless of the etiology, the finding of free air in the abdominal cavity requires surgical consultation for potential surgical management.

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Key words: Pneumoperitoneum, Vaginal perforation, Acute care surgery.

Contributions: DP and NS took care of the patient in the Emergency Department and assisted in editing the final manuscript. MR and TM drafted and edited the manuscript.

Conflict of interest: the authors declare no potential conflict of interest.

Received for publication: 31 January 2017.

Revision received: 29 April 2017.

Accepted for publication: 4 May 2017.

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Emergency Care Journal 2017; 13:6606

doi:10.4081/ecj.2017.6606

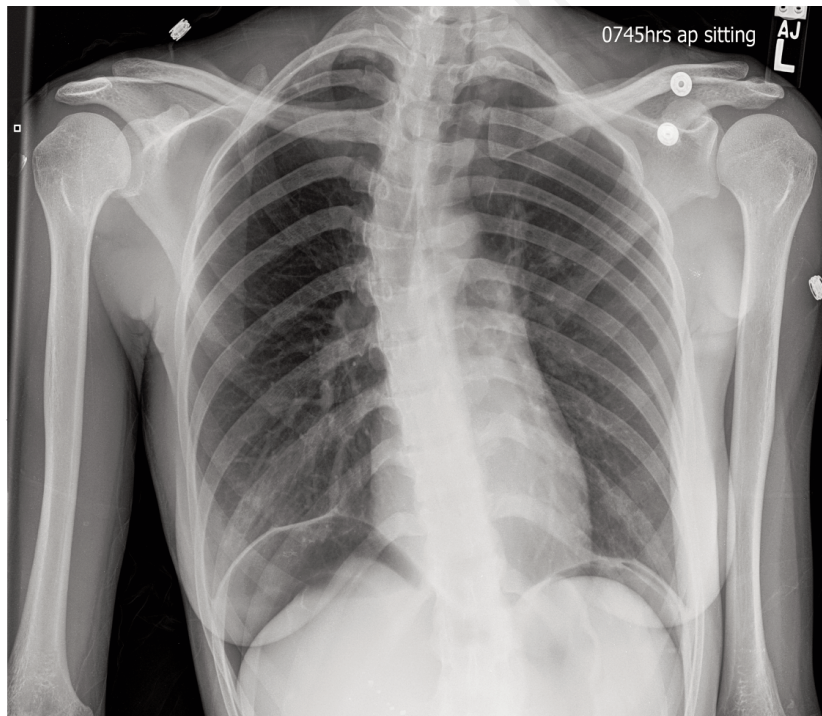


Figure 1. Upright anterior-posterior upright chest X-ray of a 22-year-old, sexually active, female demonstrating suspected pneumoperitoneum.