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Peripartum Splenic Rupture: A Rare Cause of Post-Caesarean Haemoperitoneum

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Introduction

Although rare, peripartum splenic rupture is a life-threatening cause of peripartum bleeding with high rates of mortality [1].

Case Summary

A 29 year-old G2P1 who underwent a term elective repeat caesarean section with an Alexis® O C-Section Retractor. Concerns for intra-abdominal bleeding arose 20 hours post-procedure following a pre-syncopal episode with hypotension, tachycardia, a grossly distended tender abdomen and a haemoglobin drop from 127g/L to 77 g/L. Blood transfusion was initiated and an abdominal/pelvic CT angiogram revealed moderate haemoperitoneum. Emergency laparotomy confirmed a 450ml intra-abdominal blood clot. Mild ooze at the uterine incision and vesicouterine junction was controlled with oversewing, diathermy and EVICEL®. After haemostasis was achieved in this area, ongoing bleeding was noted arising from the left upper abdominal quadrant which prompted concern for a splenic injury. The general surgical team assisted intraoperatively and laparoscopically evaluated all four abdominal quadrants. A <1cm superficial splenic capsule laceration was identified and splenic preservation and haemostasis was achieved using a harmonic scalpel. Total blood loss was 1600mL and the patient was discharged home day 3 postpartum.

Discussion

Pregnancy is associated with increased blood volume, decreased peritoneum cavity volume, splenic enlargement and structural changes which may increase the risk of splenic rupture [1-3]. The most common cause of peripartum splenic rupture is trauma and at time of caesarean may occur secondary to abdominal packing, expulsion of the neonate, or use of retractors [3,4]. In this case we believe rupture may have occurred secondary to fundal pressure during delivery of the infant however it is possible that insertion of Alexis® O C-Section Retractor may have cause direct trauma to the spleen.

Conclusion

Peripartum splenic rupture is a potential surgical emergency and this case highlights the necessity of considering this differential diagnosis in obstetric patients with hemoperitoneum. Although haemoperitoneum is commonly secondary to surgical site bleeding, careful examination of the upper abdomen is necessary to exclude other bleeding sources, including the spleen, to avoid delayed diagnosis and mortality.

References. 1. Wang C, Tu X, Li S, Luo G, Norwitz ER. Spontaneous rupture of the spleen: a rare but serious case of acute abdominal pain in pregnancy. J Emerg Med. 2011;41:503–506. 2. Sakhel K, Aswad N, Usta I, Nassar A. Postpartum splenic rupture. Obstet Gynecol. 2003;102:1207–1210. 3. Di Vella, G., Arpaio, A., Marzullo, A., & Colonna, M. (2008). Rupture of the spleen or splenic vessels (splenic emergency syndrome) in late pregnancy: A report of two autopsy cases. Forensic Science International, 176(2-3), e1-e5. 4. Denehy, T., McGrath, E., & Breen J. (1988). Splenic Torsion and Rupture in Pregnancy. Obstetrical & Gynecological Survey, 43(3), 123-131.