

Septic shock secondary to invasive Group A Streptococcus following elective section: a case report

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Introduction

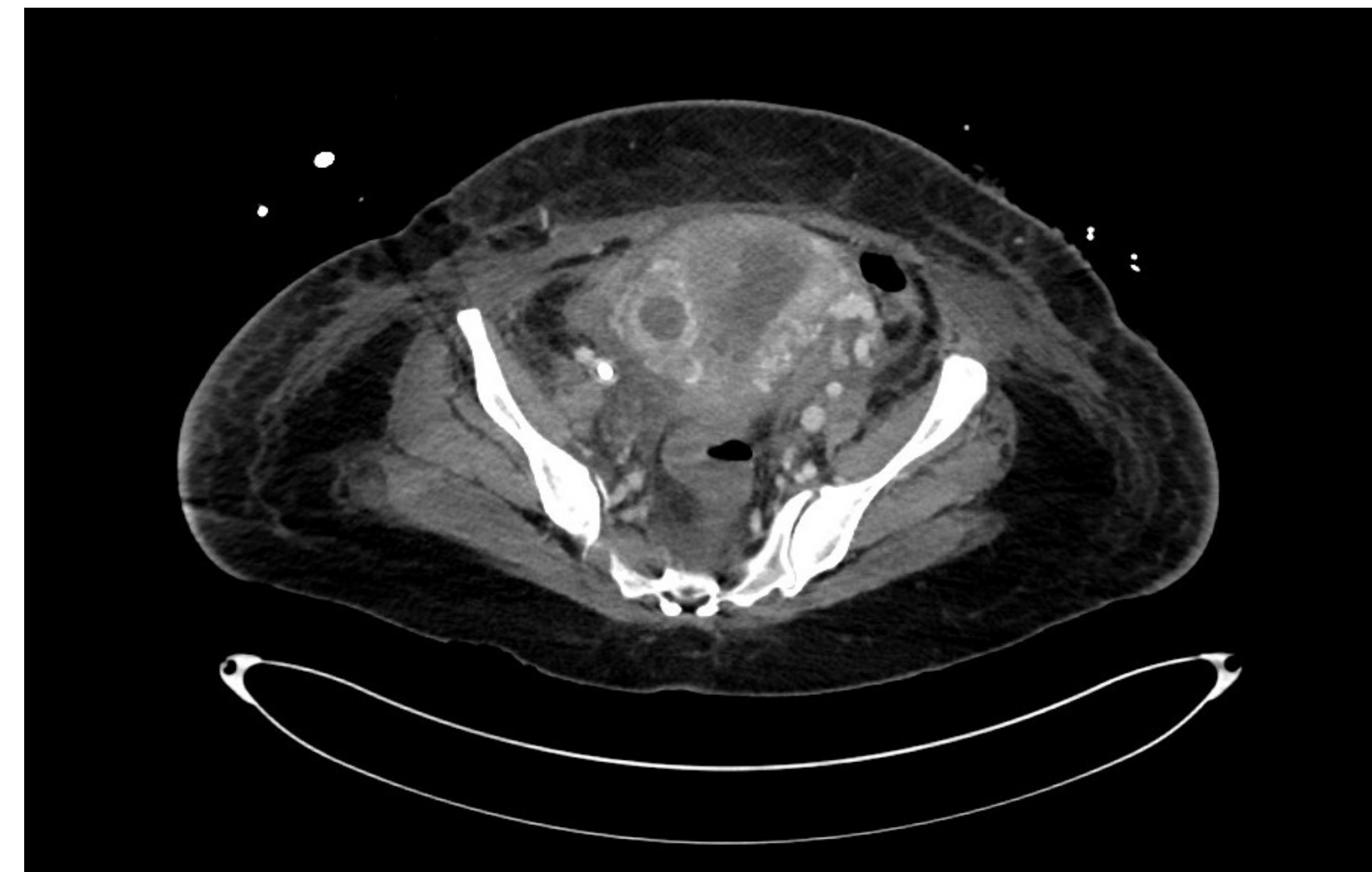
Sepsis remains a leading cause of direct maternal death¹. We report a case of septic shock secondary to invasive group A streptococcus (iGAS) following elective lower segment section.

Case Report

A 42-yr-old, primiparous woman presented to our maternity unit in septic shock, eight days post elective LSCS (gestational diabetes; IVF) - under spinal anaesthesia. On arrival, she was in extremis; despite aggressive resuscitation with intravenous fluids and vasopressors, arterial lactate was 12 on arrival to Intensive Therapy Unit (ITU). At laparotomy, two and a half litres of purulent free fluid were drained from the abdomen and inotropic requirements rapidly escalated. Anaerobic/aerobic blood and peritoneal fluid grew streptococcus pyogenes within 24 hours. Multi-organ failure ensued.

Bedside echocardiography showed severely impaired left ventricle with ejection fraction of 20-25%, and she developed acute respiratory distress syndrome, acute kidney injury, persistent acidosis and coagulopathy. Despite escalating support with maximal noradrenaline, vasopressin, adrenaline and milrinone, renal filtration and 100% inspired oxygen, she suffered a prolonged period (ten hours) of severe hypoxia (saturation of 76%).

Intravenous immunoglobulin was commenced for streptococcal toxic shock syndrome with regular antimicrobial review.



CT (day 5) – demonstrating myometrial collection & fluid filled endometrial cavity.

Radiological imaging suggested ongoing uterine collection and further surgical source removal took place on day seven. Despite withdrawal of sedation, the patient remained unconscious for several days and CT head showed multifocal foci of subcortical haemorrhages. Cardiovascular support was weaned; she was extubated on day 18 and discharged home 60 days later with ongoing plastic surgery and rehabilitation input regarding future prostheses and psychological support. Caldicott approval and patient consent gained.

Discussion

This case highlights the importance of "thinking sepsis" for timely recognition/management - mortality rates secondary to sepsis are continuing to increase steadily. Higher than expected rates of iGAS are still occurring, particularly in Yorkshire and Humber². It further highlights the need for prompt involvement of anaesthetics/ITU, as occurred in this case, alongside the vital role of multidisciplinary team working- particular emphasis on rehabilitation/psychology for the sequelae following such a critical illness



Inotrope necrosis of right hand; day 11 and day 100.

References

- 1) Bunch and Knight M. Chapter 2. Maternal Mortality in the UK 2018-20: Surveillance and Epidemiology. In: Knight M, Brunch K, Patel R, Shakespeare J, Kotnis R, Kenyon S Kurinczuk JJ (Eds.) on behalf of MBRRACE-UK. Saving Lives, Improving mothers' Care Core Report – Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2018-20. Oxford: National Perinatal Epidemiology Unit, University of Oxford 2022: p2-20.
- 2) UK Health Security Agency. Research and Analysis – Group A Streptococcal infections: report on seasonal activity in England, 2022-2023. Updated 19th January 2023. Available at: <https://www.gov.uk/government/publications/group-a-streptococcal-infections-activity-during-the-2022-2023-season/group-a-streptococcal-infections-report-on-seasonal-activity-in-england-2022-to-2023> Accessed 31st January 2023.