Ovarian Vein Thrombosis Complicating Puerperal Group ‘A’ Streptococcal Sepsis

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Abstract

Group A Streptococcus (GAS) puerperal sepsis is still one of the significant causes of morbidity and mortality, despite the dramatic advancements in knowledge, prevention, and sepsis treatment since the days of Zimmerman. The incidence of GAS infections is variable. However, it is around 3-4 cases per 100,000 population every year in developed countries. It would be higher in developing countries. GAS Puerperal sepsis is the infection of the genital tract between membranes’ rupture and the 42nd day postpartum, according to the WHO. We present the case of a 36-year-old Para 2, who came with fever and severe abdominal pain three days after vaginal delivery and progressed to septic shock. Differential diagnosis of complex appendicitis or Right Ovarian vessel thrombosis made. A Laparotomy confirmed Right Ovarian Vein Thrombosis, for which a Right Salpingo-Oophorectomy performed. Blood cultures established GAS infection. The woman made an uneventful recovery following aggressive antibiotic therapy and care in the Intensive Care Unit. The baby received antibiotics. She was discharged home on day 11, in good condition. One of the rarest complications of GAS Puerperal Sepsis is Ovarian Vein Thrombosis. Aggressive IV fluids and antibiotics therapy, as well as surgical intervention, is the mainstay of treatment. Multidisciplinary input is important.

Keywords: Group A streptococcus • Ovarian vein thrombosis • Puerperal sepsis

Introduction

Group A Streptococcus (GAS) can be very infectious. Usually, the patient presents herself to the hospital in the first week after delivery with fever and abdominal pain [1]. Transmission occurs by contact with body secretions (including droplets, vaginal secretions). Transmission can occur within the hospital (usually if develops infection within the first week) or from the community (if infection occurs after the first week) [2]. Complications of GAS infections can be pneumonia, endometritis, wound infection, necrotising fasciitis, septicemia, toxic shock syndrome, Ovarian Vein Thrombosis and/or even death [3]. The majority of those patients might need admission to intensive care units for aggressive intravenous fluids and antibiotics and early transfer to the theatre [4]. In the following paragraphs, we present a case of GAS puerperal sepsis complicated by ovarian vein thrombosis.

Case Presentation

A 36-year-old Para 2 (two vaginal deliveries before) was admitted at Term+11 days to induce labour. Subsequently, she had an uneventful delivery of a baby girl weighing 4.3 kg. She was discharged home well with her baby on the 2nd day. However, she presented herself the following day with a fever, severe abdominal pain, vomiting and diarrhoea. Her vital signs were markedly impaired (pyrexia of 38.3 degrees Centigrade, tachycardia of 122 BPM, low Oxygen saturation of 91% and hypotension of 92/48 mmHg). Physical examination revealed abdominal distension, generalised abdominal tenderness, guarding and rebound tenderness. We fixed a Central line and initiated aggressive fluid and Antibiotics therapy with little response. Her initial HB was 8.8 g/dl, with WBCS-12.9, CRP-94 and Serum Lactate-2.4. Symptoms were vague, and the clinical signs were non-specific. Abdominal/Pelvic CT-Scan raised the possibility of Acute Appendicitis or Right-Sided Ovarian Vessel Thrombosis. A Laparotomy revealed necrotic, congested and gangrenous Right-Ovary and Right-Fallopian Tube, all removed. Blood cultures returned positive for GAS infection. Aggressive antibiotic therapy was instituted with input from the Microbiology Department and included Tazocin, Clindamycin, Gentamycin and Metronidazole (for a total of 15 days) and Low Molecular Weight Heparin (for six months).

The patient was nursed in the Intensive Care Unit with invasive ventilation for 48 hours. Then, she was transferred to an Isolation room on day six post-operatively. We screened her family and close contacts for GAS, as per the Public Health team's input. The baby was treated with appropriate antibiotics by the Neonatology team. The Nutrition, Physiotherapy and Social working teams were all involved in her care. She was discharged home well on day 11 after an initial debriefing. Apart from her GP and social support teams, we also linked her with perinatal Mental Health Services. We reviewed her two months postnatally and comprehensively debriefed about the postpartum events. One year after that, she had a further pregnancy and uneventful delivery (Figures 1 and 2).

Discussion

Approximately 11,000 to 13,000 GAS infection cases per year occur in the United States [3]. There is a 20-fold increased incidence of invasive GAS in pregnant ladies than non-Pregnant; this could be due to the reduced immunity during pregnancy [4-7]. The symptoms might be vague at presentation, and hence senior involvement should be sought early. Confirmation of the diagnosis is by blood or other body fluids' culture [8]. The Ovarian vein thrombosis was...
Conclusion

Although it is a rare infection, the incidence of GAS puerperal sepsis is increasing. Ovarian Vein Thrombosis is considered a rare complication of GAS infection. Aggressive antibiotic therapy and the management of fluid and electrolyte balance and surgical intervention are indicated together with escalation to intensive care, which is the mainstay of treatment. Multidisciplinary input, as detailed above, is of paramount importance.

References


