A Rare Case Of Intrapartum Sepsis Due To *Clostridium Perfringens* Chorioamnionitis

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Background

- True maternal sepsis is rare - only an estimated 1.4% of women with clinical chorioamnionitis at term develop severe sepsis[1]
- *Clostridium perfringens* is a rare cause of intrauterine infection. *C. perfringens* infection has a high mortality rate (27-58%)[2]

Case Presentation

- 40-year-old female, nulliparous, nil past medical history. Uncomplicated antenatal course. Presented for induction of labour at 39 weeks for GDM on insulin (well controlled) and advanced maternal age
- Foley's Balloon catheter inserted day prior, unfavourable

Intrapartum Course

0630 — VE 2cm, ARM CL, Syntocinon commenced

0900 — Epidural, Syntocinon off (tachysystole)

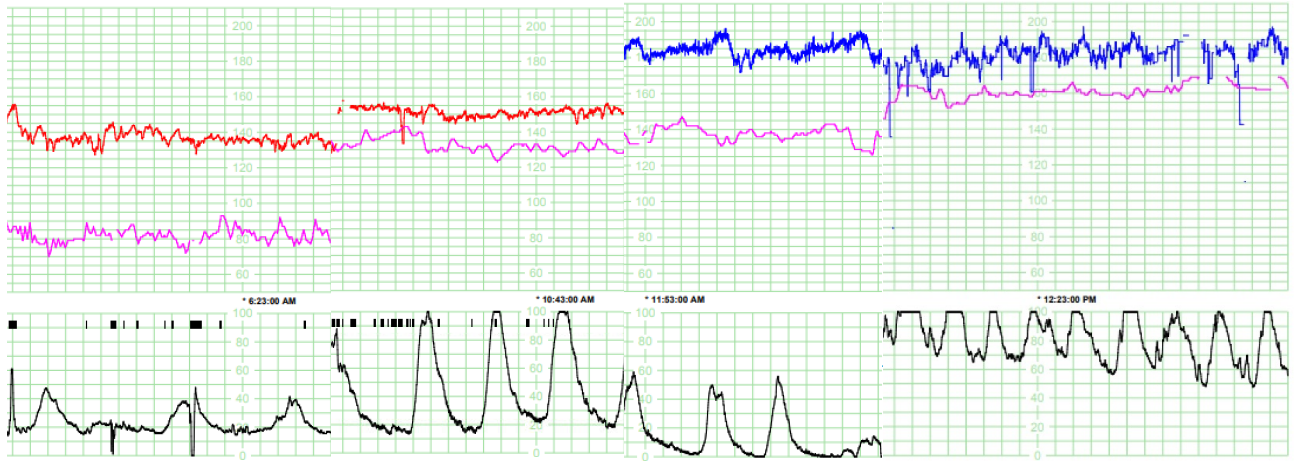
1115 — VE 7/FE/-1, MHR 130

1200 — **Temp 38.3**, HR 140, FHR 180, Sepsis pathway

1230 — HR 160, **FHR 200**, VE 8cm, terbutaline, Transferred to OT

1300 — **Theatre:** fully dilated C-section, EBL 450mL, HR 120 by end of case, sBP 100-120

1645 — **Recovery: BP 67/90**, lactate 2.9. Metaraminol infusion. 5L IVF total given, Transferred to **ICU**



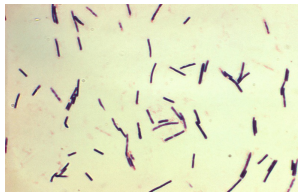
Baby: 2581g, Apgars 8 & 9, "warm to touch"
A: pH 7.18, **lactate 7.8**
Received empiric antibiotics for 12hrs, remained on ward

Outcome

- 36-hour ICU admission for ionotropic support (metaraminol), 48hrs IV antibiotics (gentamicin, amoxicillin, metronidazole) and discharged home D3 post partum with baby
- **Placental swabs (fetal/maternal):** ***C. perfringens +++***
- **Placental histopathology:** Stage II chorioamnionitis, Stage II (advanced) umbilical venulitis
- **Maternal/neonatal blood cultures:** Nil growth

Discussion

- *C. perfringens:* anaerobic gram-positive, rod-shaped bacterium, part of the clostridium genus species (*C. difficile, C-tetani)*
- Normal microflora of the genital tract (10% of women[3]), gastrointestinal tract and skin
- Rare cause of intrauterine infection, epidemiology limited to case reports[3], historically a cause of septic abortion
- Introduction of a foreign body is a common preceding event, potentially facilitating bacterial entry from the genital tract to the blood stream
- Produces A-toxin: plays a significant role in affecting cardiac contractility causing profound hypotension



C. perfringens under light microscope

Conclusion

- We report a favourable maternal and fetal outcome after *C. perfringens* intrapartum chorioamnionitis sepsis, with prompt resuscitation and delivery, despite a high mortality rate

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3. Subahi EA, Sayed S, Fadul A, Ali EA. Postpartum Septic Shock Due to Clostridium Perfringens From Chorioamnionitis: A Rare Case. Cureus. 2023 Apr 24;15(4):e38075. doi: 10.7759/cureus.38075. PMID: 37234138; PMCID: PMC10208626.