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Group A Beta-Hemolytic Streptococcus Toxic Shock Syndrome Following Elective Termination of Pregnancy: a Review of Current Literature and Recommendations

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GROUP A BETA-HEMOLYTIC STREPTOCOCCUS TOXIC SHOCK SYNDROME FOLLOWING ELECTIVE TERMINATION OF PREGNANCY: A REVIEW OF CURRENT LITERATURE AND RECOMMENDATIONS

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Background

Group A Streptococcus(GAS) also known as *Streptococcus pyogenes* causes both noninvasive and invasive infections yearly.

- Invasive infections (Streptococcal Toxic Shock Syndrome, Necrotizing fasciitis and sepsis) are rare, accounting for 13,000 cases per year but have up to a 38% mortality.
- Streptococcal Toxic Shock syndrome(STTS) occurs in only 0.5/10,000 births and is mostly seen in the immediate postpartum period
- Symptoms are often non subjective and consistent with septic shock often causing a delay in diagnosis and appropriate management

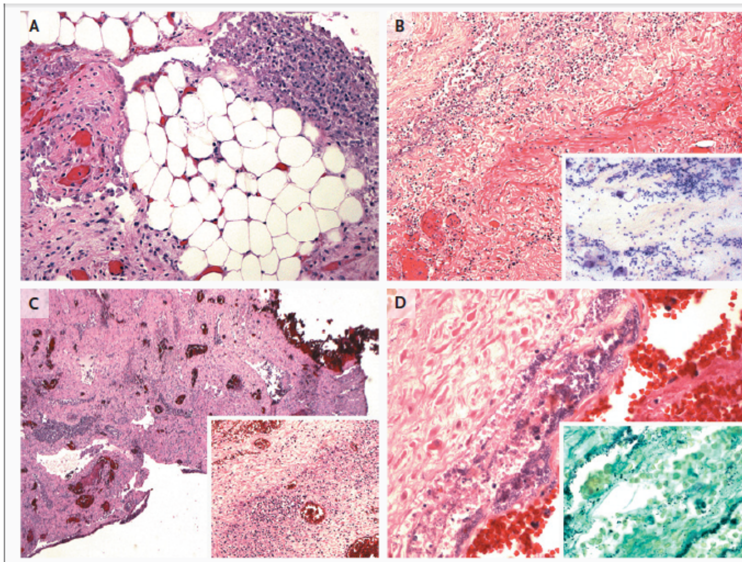

Fig 1. Histological features of Necrotizing Fascitis and Endometritis from GAS. The endometrium showed acute inflammation consistent with myometrial abscess formation and patchy necrosis of the myometrium.

Case Description

- 30yo G3P2021presents with 3 day onset of right wrist and lower extremity pain.
- PMHx noncontributory, PSHx significant for elective termination of pregnancy with Laminaria and dilation and evacuation 6 days prior. Vital signs and physical examination was benign at initial visit. Patient was discharged home with pain medications. Diagnosed with musculoskeletal pain.
- Over the next 3 days she would present twice more to the ED with worsening pain and difficulty ambulating. On the 3rd visit, presentation was consistent with Septic Shock and physical examination showed lower extremity Petechia and bulae formation.
- Given history of recent D&E, Puerperal toxic shock syndrome suspected. Endometrial Biopsy confirmed GAS.
- Patient underwent emergent Total laparoscopic Hysterectomy, bilateral salpingectomy and debridement of her lower extremities. All specimens were + for GAS.
- Patient was started on Penicillin and Clindamycin which was later switched to Linazolid due to resistance.
- Recovery was complicated by pelvic thrombophlebitis requiring Heparin initiation and moderate tissue damage to her lower extremities requiring debridement and hyperbaric oxygen therapy.
- Patient was hospitalized for over 1 month before she was stable enough for discharge.

Conclusion

- It is imperative that physicians more efficiently recognize and appropriately treat Puerperal STSS
- Review of the literature shows that the average age of infection was 28.5yo with 85% of infection happening in the postpartum period.
- Common symptoms include fever, abdominal pain, leukocytosis, tachycardia and hypotension. Patients who present 5-8d postpartum tend to have more sever symptoms and spread to the extremities resulting in necrosis.
- Endometrial biopsy for confirmation and prompt source control with hysterectomy and bilateral salpingectomy is recommended.
- Early antibiotic therapy with Penicillin and Clindamycin is recommended.

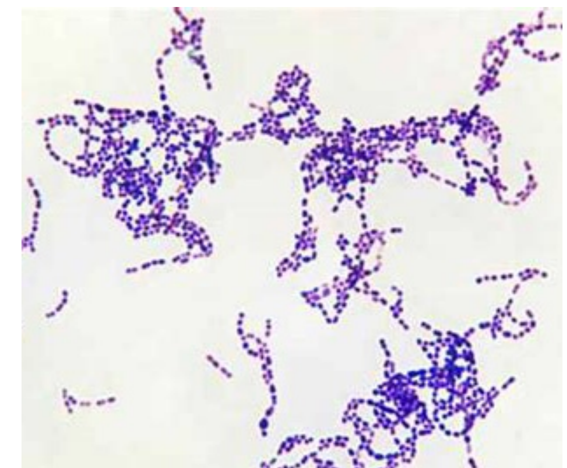

Fig 2 Gram-Positive cocci in chains consistent with Group A Beta Hemolytic Streptococcus.