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A Rare Case of Invasive Metastatic Group B Streptococcal Infection with Toxic Shock-Like Syndrome.

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This is the **first case** of **Group B streptococcal** infection causing **Toxic-shock like syndrome** with rapidly developing metastatic infection including **musculoskeletal** and **epidural abscess** and **septic arthritis**.



Erythema of TSLS of the Right Elbow



Erythema of TSLS the Left Elbow



Metastatic Epidural Abscess

INTRODUCTION

- Incidence of invasive GBS infection is 10.9 cases/100,000
- Toxic shock syndrome is caused by exotoxins which bypass normal T-cell activation and cause acute fever, rash, hypotension, confusion, and multi-organ failure.
- These exotoxins found in *Staph* and *Group-A Strep* have never been discovered in GBS.
- Animal models have demonstrated a toxic shock effect with GBS, indicating a possible unidentified pyrogenic exotoxin.

CASE/CLINICAL COURSE

62-year-old obese male with diabetes mellitus presented with pain, swelling, and redness of the right shoulder and ankle for one week after a fall. Vitals were remarkable for tachycardia to 106 BPM and fever of 101°F with labs showing a leukocytosis to 23,500 u/L. The patient was started on ceftriaxone IV but continued to develop worsening fever, leukocytosis, encephalopathy, diffuse extremity pain, and whole-body macular erythema at 48 hours. Blood cultures grew GBS and TSLS was suspected. Adjunct clindamycin was started. MRI of the extremities demonstrated abscesses of the right levator scapulae, posterior scalene, brachioradialis, and right ankle. MRI of the spine showed epidural abscesses at L3-L5 and septic arthritis of the spinal facets at L4-L5. Operative abscess removal with joint washouts were performed by neurosurgery and orthopedics, and the patient symptomatically improved within 2 weeks on IV ceftriaxone. He was subsequently continued on cefazolin for 10 weeks and did well at follow-up.

DISCUSSION

- From review, there have been 17 published cases of GBS TSLS in the literature.
- Most common causes for invasive GBS:
 - Soft tissue
 - Post-splenectomy
 - Tampons,
 - TNF- α therapy.
- Immunocompromised patients are at highest risk
- Unlike prior reports, our case describes GBS TSLS from a soft tissue primary with metastatic infection to the epidural and joint spaces.
- Clinicians should be aware of the potentially severe sequelae of GBS infections and consider tailoring antibiotic therapy to cover for this organism when encountering toxic shock-like syndrome.

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