

A Case of Vibrio Vulnificus in Galveston

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Introduction

- Vibrio Vulnificus is a gram negative bacteria that thrives in marine environments.
- Necrotizing soft tissue wound infections occur after injured skin is introduced to contaminated waters (Oliver et al). It starts by inflicting characteristic large, weepy bullae, which progresses to sepsis and necrotizing infection.
- Although Galveston County health district only reported once case in 2020, our local region has a higher infection rate due to proximity to the gulf coast (Sheer et al, Horseman et al).
- Prognosis is poor. Median Survival is 50% as this infection typically occurs in immunosuppressed, diabetics, or renal insufficiency (Sheer et al).

Case Presentation

- 57 M with history of heart transplant (2019) on immunosuppressants, DM, HTN, HLD, CHF, and CAD, presenting with RLE pain, swelling, and erythema. Patient reports he was in Galveston a week ago when he stepped on a seashell while fishing.
- Associated lethargy, fever, vomiting, dizziness, and headache. On physical exam, there was a right plantar laceration and weeping bullae. He was started on Doxycycline and Rocephin.
- Labs and vitals were consistent with septic shock and he required pressor support despite fluid resuscitation.
- An emergent above the knee amputation (AKA) was done.
- On POD3, there was increasing leukocytosis and blanching erythema/pain at the right inguinal crease. Due to concerns for infection progression and possible need for Right Hip Disarticulation the patient was transferred to an outside institution.
- At this hospital, the patient was able to continue antibiotic management and had his AKA formalized after 1 week.
- He was then transferred to an inpatient rehabilitation center and subsequently discharged home a few weeks later.
- Reported using Care Guidelines.

Images



Figure 1. Right Lower Extremity Upon Presentation



Figure 2. Right Lower Extremity Status Post Above Knee Amputation; Prior to Formalization.

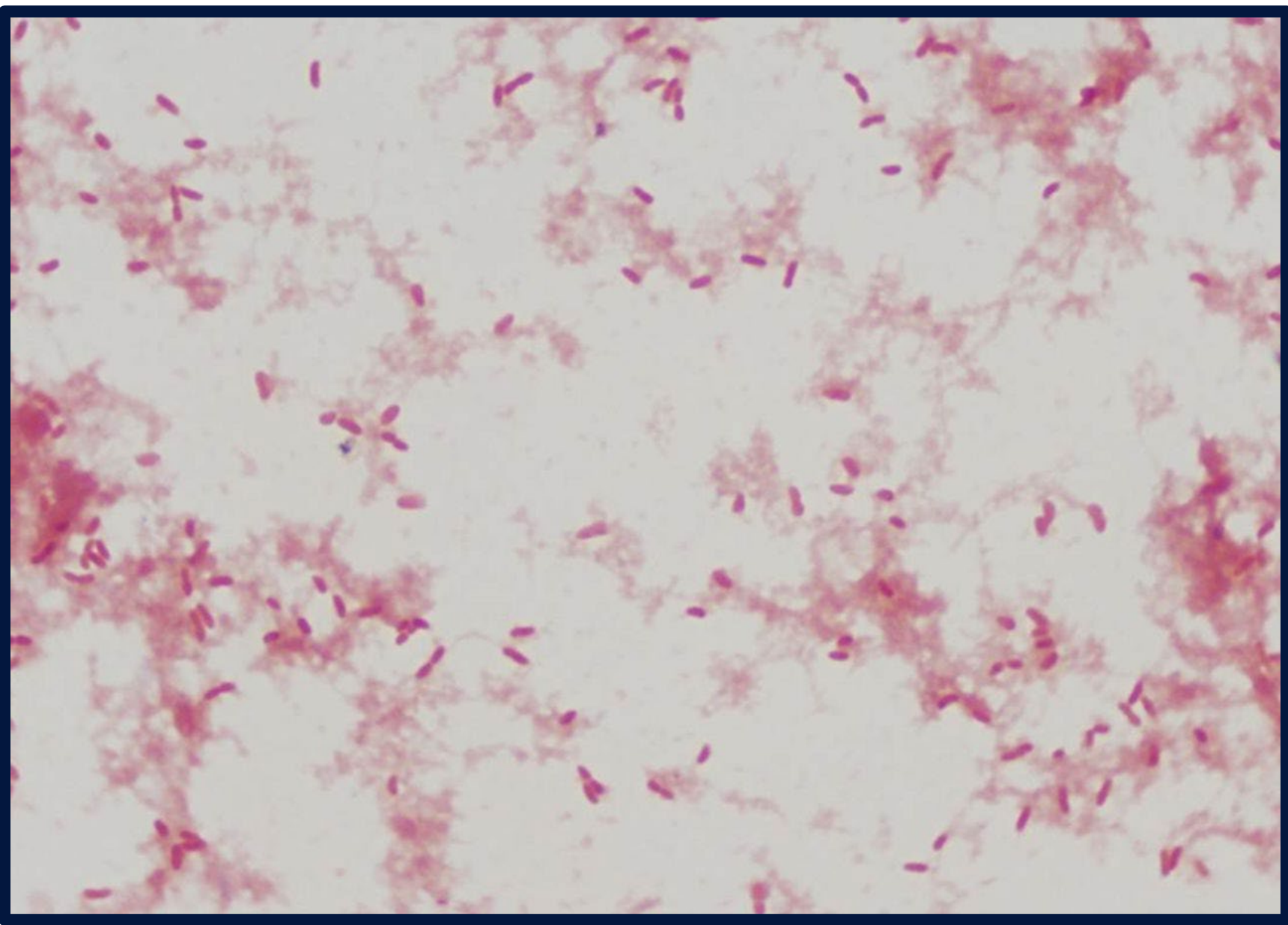


Figure 3: Vibrio Vulnificus with Gram Stain.



Figure 4: Oysters on Galveston Beach (Texas Standard)

Discussion

- Typically in Vibrio Vulnificus infections, a patient's immune system will utilize antigen presenting cells to present to T cells which can mount an immune response (Tacket et al).
- Blood, wound, and stool cultures can aid in the diagnosis, but should not delay treatment with significant clinical suspicion.
- Management involves antibiotics (Doxycycline + Ceftriaxone) and supportive care. If the tissues in the extremities become gangrenous, then antibiotic regimen will not suffice and surgical intervention may be necessary.

Conclusion

- Although Vibrio Vulnificus has a low incidence in North America, it is more common in this region and has significant rates of morbidity and mortality in vulnerable populations (Baumeister et al).
- Patients should be treated empirically with a low threshold for surgical intervention.

References

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