



UNCHARTED WATERS: *AEROMONAS HYDROPHILA* CAUSING PLEURAL INFECTION IN AN IMMUNOCOMPROMISED PATIENT

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BACKGROUND

Aeromonas hydrophila is a gram-negative bacillus commonly found in marine environments, occasionally causing gastroenteritis, soft tissue infections, and sepsis [1]. Extra-intestinal infections, especially in the pleural cavity, are rare [2]. We report an uncommon case of acute bacterial empyema caused by *A. hydrophila* in an immunocompromised patient.

CLINICAL PRESENTATION

A 60-year-old Filipino male with stage IV pancreaticobiliary carcinoma and malignant pleural effusion presented to our emergency department with sudden difficulty breathing. He had a history of recurrent spontaneous bacterial peritonitis, treated with multiple antibiotics. Upon examination, his chest pigtail catheter revealed purulent material, and was later diagnosed as empyema thoracis. Broad-spectrum antibiotics were administered, and cultures later identified *A. hydrophila*, which was pansensitive. The patient's clinical status improved with continued antibiotic therapy.



DISCUSSION

Aeromonas hydrophila is a facultatively anaerobic, gram-negative bacillus typically linked to freshwater trauma or contact with aquatic animals. While gastroenteritis is the most common manifestation, extra-intestinal complications like bacteremia, necrotizing fasciitis, cholangitis, meningitis, and pneumonia are rare [1, 2]. Bacterial empyema caused by *A. hydrophila* is particularly scarce in the literature [1, 2, 3, 4]. This case is one of the few reported instances of empyema thoracis caused by this pathogen. Most patients who develop this infection have risk factors such as liver cirrhosis or gastrointestinal malignancy [2, 3]. Although the connection between *Aeromonas* infections and liver cirrhosis is not fully understood, it seems that *Aeromonas spp.* may exhibit heightened virulence in cirrhotic patients. The antibiotic susceptibility pattern of clinical isolates aligns with previous reports, showing broad susceptibility. However, patients with *A. hydrophila* empyema often face high mortality rates, up to 50%, likely due to their immunocompromised states [4].

CONCLUSION

This case highlights a rare instance of *A. hydrophila* empyema in an immunocompromised individual. With increasing cases of extra-intestinal *A. hydrophila* infections in Southeast Asia, further studies are recommended to better understand this pathogen's mechanisms and treatment options.

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