



## CASE REPORT

## *Aeromonas Hydrophila* Infection in an Immunocompetent Patient Leading to Necrotizing Fasciitis

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### Abstract

We present to you the case of 77 YO female with PMH of DM, A fib and recent H/O ascending cholangitis and cholecystectomy complicated by ruptured gallbladder with bile peritonitis and JP drain placement. After the discharge she was having diarrhea and was tested positive for C diff and was started on oral vancomycin. Almost about 2 weeks after the discharge she started to develop sudden onset of right leg pain, because of that she was taken to the ED of outside hospital where there was a suspicion of DVT, but duplex came out negative. So was send to our center for further evaluation and management where CT scan was done which showed necrotizing fasciitis. She was taken to the OR for amputation and later tissue culture came positive for Rare *Aeromonas hydrophila/caviae* complex.

### Introduction

*Aeromonas hydrophila* is a heterotrophic gram-negative rod mainly found in areas with a warm climate but can be found in fresh and brackish water. It is mostly pathogenic to fish and amphibians more than to humans. Infection is spread via fecal-oral transmission during direct ingestion or drinking of contaminated water or foods. Infection can also be transmitted by eating contaminated meat, dairy, shrimp, or fish. One of the diseases it can cause in humans, gastroenteritis, occurs mostly in young children and people who are immunocompromised or have growth problems. *Aeromonas hydrophila* is also associated with cellulitis. And in some cases, necrotizing fasciitis has also been reported.

### Case Presentation

77 YO female with PMH of DM, A fib and recent H/O ascending cholangitis and cholecystectomy com-

plicated by ruptured gallbladder with bile peritonitis and JP drain placement was admitted to our hospital for severe right lower extremity pain. Patient started to have diarrhea few days after discharge for ascending cholangitis. Almost about 2 weeks after the discharge she started to develop sudden onset of right leg pain. Whole right leg was involved. Along with that she was also having increased Shortness of breath, because of that she was taken to the outside hospital. In the hospital she was found to be hypotensive, hypoxic and tachycardic. Labs work were done which showed increased WBC count to 29.8 K/uL, with band of 11 and lactic acid of 1.9. Chest X-ray showed pulmonary congestion. Patient was started on IV fluids and IV antibiotics meropenem, vancomycin and metronidazole. Because of the pain in the leg there was a suspicion of DVT so the duplex was done which ruled out DVT, because of her critical condition she was then send to our hospital for management in the ICU. with the IV fluid as well patient BP was on lower side so was started on norepinephrine drip. On examination of her right leg she was found to have few bullae, was cold to touch, crepitation was present and there was no pulse. So, emergent CT scan of the leg was done which showed features of necrotizing fasciitis. General surgery was consulted and was taken for amputation. Later tissue culture came positive for *Aeromonas hydrophila*.

### Discussion

*Aeromonas hydrophila* is a heterotrophic gram-negative rod mainly found in areas with a warm climate but can be found in fresh and brackish water. Infec-

tion is from feco oral route and can cause gastroenteritis. In some cases, it can cause cellulitis and necrotizing fasciitis.

There has been some case report of necrotizing fasciitis caused by *Aeromonas hydrophila*. In one case patient got necrotizing fasciitis after getting wound infection from direct contact with brackish water [1]. There was another case report of fulminant necrotizing fasciitis from a hydrophila that was not associated with trauma, liver disease, or immunosuppression [2]. Our case is also somewhat like the second case, patient did not have any trauma and was not immunocompromised and was not exposed to contaminated water. The only thing our patient had was diarrhea which was *C. diff* positive, but one can argue that it could have been caused by *Aeromonas hydrophila* and *C. diff* was just the colonizer. There has case report on *A. hydrophila* causing necrotizing fasciitis after surgery, including PCI [3].

There is one retrospectively reviewed study which showed that necrotizing fasciitis caused by *A. Hydrophila* is more rapidly progressive than cause by *K. Pneumoniae* [4]. Which in turn emphasis on getting surgical intervention as soon as possible.

## Conclusion

Necrotizing fasciitis caused by *A. hydrophila* is a rare entity but is a serious condition and prompt treatment is required. Previously was thought to occur in immunocompromised patient now is being seen on immunocompetent patient as well. As seen in our case can be preceded by diarrhea as well, and one must be vigilant enough to diagnose these conditions.

## References

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