

Listeria monocytogenes in Perianal Abscess

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Abstract

In healthy adults and children, *Listeria monocytogenes* can cause mild, self-limiting gastrointestinal infections. However, people with underlying conditions may contract serious, potentially fatal infections like meningitis and bacteremia. A 60-year-old woman with liver cirrhosis developed abdominal pain and a fever, and it turned out that she had a *L. Monocytogenes* perianal abscess. A recent epidemiological study found that the presence of cirrhosis may also be a risk factor for the development of invasive disease.

Keywords: Gastrointestinal; Meningitis; Bacteremia; Perianal abscess

Introduction

Gram-positive rods with rounded edges characterize *Listeria monocytogenes*, a facultative anaerobe. It was first identified as a human pathogen in 1929 and first described as the cause of an outbreak in laboratory animals in 1926. It typically results in self-limiting, relatively mild gastrointestinal diseases in healthy adults and children. However, it typically results in severe illness, such as meningitis and bacteremia, in patients who already have risk factors for the condition. Serious infections caused by *L. monocytogenes* are more likely to affect newborns, pregnant women, elderly people, people with Human Immunodeficiency Virus (HIV) infection, and people taking immunosuppressants, including biological agents like Tumor Necrosis Factor (TNF)-alpha inhibitors. Although rare, *L. monocytogenes* can cause focal invasive infections like abscesses. In this paper, we describe a patient with cirrhosis who developed this organism-caused perianal abscess [1-5].

Case study

A 60 year old woman presented to us with fever, dyspnea, and abdominal pain with a history of cirrhosis and treated hepatocellular carcinoma caused by non alcoholic steatohepatitis complicated by esophageal varices. The patient first began experiencing tenesmus related abdominal pain nine days before the presentation. She attempted to treat her stomach problem with a prescription but to no avail. The patient had a fever and dyspnea one day before the presentation. The following day, she presented to the emergency room. She admitted that she ate strawberries and vegetables that had not been cooked on a regular basis, but she denied that she had ever eaten cured ham or cheese that had not been processed. She denied traveling abroad, and none of her relatives had symptoms similar to hers. She appeared to be generally ill during an examination of her body. Her body temperature was 37.9°C, her pulse rate was 100 beats per minute, and her blood pressure was 100/65 mmHg. Her respiratory rate was not measured. Her mid-region was delicate, yet there was gentle stomach distension that was not delicate to contact. There was no apparent mass or ascites. The remainder of the physical exam was uninteresting. White blood cell counts were 10,800/L, with 82.7% neutrophils, 12.2 g/dL of hemoglobin, and a platelet count of 170,000/L. Total and direct bilirubin were elevated to 2.6 and 1.4 mg/dL, respectively. Aspartate Aminotransferase (AST) and Alanine Aminotransferase (ALT) were both at 2.0 g/dL in the serum [6-10].

The Blood Urea Nitrogen (BUN) level was 13 mg/dL, the creatinine level was 1.00 mg/dL, and the Lactose Dehydrogenase (LDH) level was

205 U/L. The estimated glomerular filtration rate was 43.3 mL/min/1.73 m². A 63-millimeter-diameter perianal abscess was discovered by computed tomography of the chest and abdomen with enormous pleural liquid. The pleural fluid was found to be transudate after a thoracentesis. Cefmetazole was given intravenously without the abscess being drained. Upon admission, negative results were obtained from pleural fluid, urine, and blood cultures. On day 12 after admission, the antibiotic was changed to iperacillin/tazobactam due to the persistent fever. On day 16 after affirmation, waste of the sore was performed and Gram-staining uncovered different Gram-positive bars. The antibiotic was changed to ampicillin/sulbactam administered intravenously. Using the BD BBL Crystal GP system (Becton, Dickinson, and Company, Franklin Lakes, USA), culture of the drained abscess revealed *L. monocytogenes* because it yielded motile, short, Gram positive rods that were catalase positive and exhibited weak beta hemolysis and hydrolysis of hippuric acid. On the 18th day after admission, the antibiotic was abruptly changed to ampicillin. The drainage tube was removed on day 26, and the antibiotic was switched to oral amoxicillin/clavulanic acid on day 29 for two weeks after her body temperature returned to normal. She was released home without repeat [11-12].

Discussion

L. monocytogenes infection rarely results in local invasive infections like abscesses. We were only able to locate a few cases of organism caused perianal abscess, making it even rarer. Described a patient with diabetes who lived in Portugal. In a case series of *Listeria* infections in Australia. One out of every three patients had a perianal abscess, but the case details were not provided. *Listeria* infections in Denmark were also presented, and two of the 30 cases had perianal abscesses. Our report is, similarly as our writing search could decide, the first to depict a case happening in Asia.

We consider this perianal abscess to be a mono organism infection rather than an abscess caused by mixed bacteria due to the fact that Gram staining revealed only one Gram-positive rod, which turned out

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Received: 01-April-2023, Manuscript No: awbd-23-95032; **Editor assigned:** 03-April-2023, PreQC No: awbd-23-95032(PQ); **Reviewed:** 17-April-2023, QC No: awbd-23-95032; **Revised:** 21-April-2023, Manuscript No: awbd-23-95032(R); **Published:** 28-April-2023, DOI: 10.4172/2167-7719.1000173

Citation: Wilson K (2023) *Listeria monocytogenes* in Perianal Abscess. Air Water Borne Dis 12: 173.

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to be *L. monocytogenes*. However, we cannot rule out the possibility that the Gram staining was actually a poly microbial infection with false negative staining/culture other than *Listeria*. We don't know why the patient had a transudate pleural effusion, but it could have been caused by his underlying liver cirrhosis.

Conclusion

Why did the patient develop a disease that is so uncommon? Despite the absence of any obvious outbreak surrounding the patient, we identified uncooked food as a potential transmission route. Due to the fact that *L. monocytogenes* rarely infects healthy, immunocompromised individuals, outbreaks of other pathogen caused foodborne diseases are less likely to occur. Once inhaled, some of the organism can enter the intestinal wall by passing through the stomach and duodenum. After that, it is able to enter both phagocytic and nonphagocytic cells. As an intracellular creature, *L. monocytogenes* can move starting with one cell then onto the next by keeping away from the extracellular humoral invulnerable framework. Therefore, *L. monocytogenes* was able to enter the rectum's epithelial cells and form an abscess in the perianal area, which is why there was no bacteremia.

Acknowledgment

None

Conflict of Interest

None

References

1. Gray ML, Killinger AH (1966) *Listeria monocytogenes* and listeric infections. Bacteriol Rev 30: 309-382.
2. Johnson JE, Mylonakis E *Listeria monocytogenes*. Principles and Practice of Infectious Diseases E-Book (Kindle Location 2257). Elsevier Health Sciences. Kindle Edition.
3. Teixeira AB, Lana AMA, Lamounier JA, Pereira da Silva O, Eloi-Santos SM (2011) Neonatal listeriosis: the importance of placenta histological examination - a case report. AJP Rep 1: 3-6.
4. Janakiraman V (2008) Listeriosis in pregnancy: diagnosis, treatment, and prevention. Rev Obstet Gynecol 1: 179-185.
5. Muñoz P, Rojas L, Bunsow E (2012) Listeriosis: an emerging public health problem especially among the elderly. J Infect 64: 19-33.
6. Kales CP, Holzman RS (1990) Listeriosis in patients with HIV infection: clinical manifestations and response to therapy. J Acquir Immune Defic Syndr 3:139-143.
7. Bowie VL, Snella KA, Gopalachar AS, Bharadwaj P (2004) *Listeria meningitis* associated with infliximab. Ann Pharmacother 38: 58-61.
8. Gasanov U, Hughes D, Hansbro PM (2005) Methods for the isolation and identification of *Listeria* spp. and *Listeria monocytogenes*: a review. FEMS Microbiol Rev 29: 851-875.
9. Uh Y, Hwang GY, Jang IH (2016) Identification results of aerobic gram positive bacteria isolated from blood cultures using BBL crystal GP ID system. Korean J Clin Microbiol 4: 22-27.
10. Al Khatti AA, Al Tawfiq JA (2010) *Listeria monocytogenes* brain abscess in a patient with multiple myeloma. J Infect Dev Ctries 4: 849-851.
11. Duarte F, Pinto SM, Trigo AC (2019) A rare presentation of *Listeria monocytogenes* infection: perianal abscess associated with lumbar spine osteitis. IDCases 15: e00488.
12. Chavada R, Keighley C, Quadri S, Asghari R, Hofmeyr A (2014) Uncommon manifestations of *Listeria monocytogenes* infection. BMC Infect Dis 14: 64.