



Chronic Salmonella Cervical Lymphadenitis and Abscess in a Diabetic Patient

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INTRODUCTION

- *Salmonella* infections typically present as gastroenteritis
- Less than 1% of cases involve extraintestinal manifestations
 - Most commonly in immunocompromised hosts
 - HIV
 - Diabetes
 - Immunosuppression
- Rarely, head and neck infections have been described
 - Lymph node abscess
 - Intramuscular abscess
 - Necrotizing soft tissue infection
 - Thyroid abscess

CASE PRESENTATION

- Patient: 51-year-old male with poorly controlled type 2 diabetes (HbA1c 11.6%) and hypertension
- Presentation:
 - Three-month progressive left neck swelling, night sweats, and weight loss
 - Three-week rapid enlargement, new-onset pain, erythema, odynophagia, fever
 - No gastrointestinal symptoms
- Diagnostics:
 - CT neck with contrast:
 - Multistation left-sided cervical lymphadenopathy
 - Dominant centrally necrotic cystic left level 2A lymph node 3.0 × 4.2 cm
 - Blood cultures negative
 - Collected after initiation of antibiotics
 - Concern for malignancy
- Initial treatment:
 - IV antibiotics
 - IR-guided aspiration and biopsy
 - Culture: Purulent fluid, *Salmonella* species
 - Pathology: benign reactive lymphadenopathy

IMAGING



Figure 1. Initial CT imaging

CASE RESOLUTION

- Further course:
 - Persistent symptoms, residual fluid on CT
 - Surgical incision and drainage
 - Culture: Gram-negative bacilli, no acid-fast bacilli
 - Pathology: reactive lymph node tissue with paracortical hyperplasia, suppurative granulomas, polytypic plasmacytosis
 - Reactive process without malignancy
- Resolution
 - Improvement, discharge on oral antibiotics, resolution of symptoms

DISCUSSION

- Deep neck infections due to *Salmonella* are extremely rare
- Diabetes is a key predisposing factor
- Clinical and radiologic mimicry of malignancy complicates diagnosis
- Likely pathogenesis: GI infection with transient bacteremia and seeding of cervical nodes
- Management requires:
 - Early imaging
 - Drainage for source control
 - Culture-directed antibiotic therapy
 - Multidisciplinary coordination

CONCLUSION

- Malignant-appearing neck abscesses can be caused by *Salmonella* lymphadenitis
- Diabetes predisposes to extraintestinal salmonella infections
- A high index of suspicion and interdisciplinary team is required to address rare infections in diabetic patients

REFERENCES

1. Pastagia M, Jenkins SG. Salmonella neck abscess as an opportunistic infection in diabetes mellitus. Case Rep Infect Dis. 2013;2013:708419. doi:10.1155/2013/708419
2. Kwon MH, Kang MI, Chun JY, et al. A case of neck abscess caused by Salmonella serotype D in a patient with liver cirrhosis. Yonsei Med J. 2010;51(1):128-130. doi:10.3349/ymj.2010.51.1.128
3. Balaji L, Manoharan H, Prabhakaran N. An Atypical Pathogen at an Atypical Location: A Rare Case of Salmonella-Associated Submandibular Abscess. Cureus. 2024;16(8):e66026. Published 2024 Aug 2. doi:10.7759/cureus.66026
4. McLeod N, Lastinger A, Bryan N, Kieffer T, Wolfe T. Salmonella neck abscess in a diabetic. IDCases. 2019;17:e00541. Published 2019 Apr 19. doi:10.1016/j.idcr.2019.e00541
5. Doya L, Doya L, Ghanem A. Salmonella typhi: a rare cause of neck abscess. Oxf Med Case Reports. 2022;2022(11):omac120. Published 2022 Nov 24. doi:10.1093/omcr/omac120