Salmonella Lymphadenitis Mimicking Neoplastic Process in a Teen

BY ERIN DODD, JOSHUA MITCHELL, MD, SUSAN KEARNEY, MD, AND JAMES SIDMAN, MD, UNIVERSITY OF MINNESOTA MEDICAL SCHOOL, CHILDREN’S HOSPITALS AND CLINICS OF MINNESOTA

A 17-year-old female was referred to otolaryngology for evaluation of neck masses. The masses had slowly enlarged since they were first noticed three to four months prior to presentation. The patient denying having associated systemic symptoms (fever, chills, dysphagia, weight loss, night sweats). Past medical history was significant for beta thalassemia, non-transfusion iron overload and vitamin D deficiency. The patient and her family had immigrated to the United States from a Thai refugee camp in 2010.

Physical exam showed a well-appearing young female with mild generalized pallor. Palpation revealed a 3 x 6 cm submental mass and a 4 x 7 cm mass deep to the left sternocleidomastoid muscle. Both masses were firm, nontender, nonfluctuant and fixed to nearby structures, raising concern for malignancy. The remainder of the physical examination was unremarkable.

Hematologic and iron studies were consistent with her baseline beta thalassemia. Additional laboratories (CBC, LDH, uric acid, total and direct bilirubin) were within normal limits. CT scan confirmed a large, homogenous mass in the submucosal space deep to mylohyoid and a second mass deep to the left sternocleidomastoid. Associated lymphadenopathy was not reactive in appearance. This presentation was most concerning for lymphoma, and recurrent tuberculosis or another neoplastic process in a Teen. The masses had slowly enlarged since they were first noticed three to four months prior to presentation. The patient denying having associated systemic symptoms (fever, chills, dysphagia, weight loss, night sweats). Past medical history was significant for beta thalassemia, non-transfusion iron overload and vitamin D deficiency. The patient and her family had immigrated to the United States from a Thai refugee camp in 2010.

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Discussion

Nontyphoidal Salmonella (NTS) species are most commonly associated with acute gastroenteritis, while lymphadenitis is a rare extraintestinal manifestation of salmonellosis. Only a handful of cases have been reported in the literature. Although most cases are self-limited, bacteremia complicates up to 5%. Focal NTS infections can occur with or without sustained bacteremia and are most prevalent and severe in immunocompromised hosts.

Conditions resulting in iron overload, such as beta thalassemia, predispose individuals to salmonellosis by impairing their immune function. Salmonella lymphadenitis is rare in immunocompromised hosts. NTS Salmonella spp. should be on the differential as a causative pathogen of cervical lymphadenopathy in select patients with iron overload thalassemia or other immunodeficiency states.

REFERENCES