Unlikely findings in a young woman with neck pain

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A 22 year old female was admitted to this hospital for generalized body and neck pain, fronto-parietal headache with associated left eye pain, blurry vision, and abnormal labs. The patient had been well until three weeks prior to admission, when she developed tender cervical lymphadenopathy. Two days preceding admission she presented to her PDM's office where blood work and computed tomography scan of her neck and chest were ordered however, due to worsening symptoms of fatigue, fronto-parietal headache and neck pain, she returned to her PDM prior to completion of her tests. Ibuprofen was prescribed for pain but it did not improve her situation and she was admitted to the hospital for further assessment. The patient denied night sweats, fever, chills and sore throat. She was status post cholecystectomy in 2012 and had a past medical history of lower back pain, hypothyroidism, and vitamin D deficiency. The patient took prescribed Ibuprofen, Vitamin D3, Levothyroxine and had no known allergies. On examination, the temperature was 37.5°C, blood pressure 122/71 mm Hg, pulse of 89 beats per minute, respiratory rate of 16 breaths per minute, and oxygen saturation of 99% on room air. Right and left anterior cervical chain lymph nodes of the neck measured 1.5 cm in length. Lymph nodes were red, tender, and warm to palpation on the left and non-tender to palpation on the right. Lymph nodes in the supraclavicular and axillary region were not appreciable. Abdomen was scaphoid in appearance, soft and non-tender to palpation with no hepatosplenomegaly. The remainder of the physical examination was unremarkable. Patient was placed under neutropenic precautions due to severe neutropenia. TSH and TPO antibodies were elevated. Urine analysis, liver, and renal function tests were normal. Connective disease work-up revealed negative results as were the results for EBV viral capsid antigen and antibodies IgG, IgM, hepatitis B surface and core antigens, hepatitis C antibodies, hepatitis A antibodies, rapid plasma reagin, parvovirus antigens, and HIV western blot and viral load. CT scan of neck, thorax, abdomen and pelvis showed multiple mildly prominent lymph nodes present throughout the neck including levels Ia and Ib, levels II, levels III, IV, and V. The largest nodes were at level V where a left node, measured 14x9 mm and a left level Vb node measured 16x14 mm. There were bilateral parotid lesions, also most likely lymph nodes measuring 8.6x13 mm on the right and 9.3x7.6 mm on the left. Multiple bilateral axillary lymph nodes were also present but no nodal necrosis. There was no acute process in the abdomen or pelvis. During the course of hospital stay the patient developed fever and was started on intravenous antibiotics for neutropenic fever. Blood and urine cultures were sterile on two different occasions. Cervical lymphnode biopsy was done which showed necrotizing lymphadenitis, AFB stain for mycobacteria was negative, and GMS for fungus was also negative. Bone marrow biopsy was done which revealed a hypocellular bone marrow for age (approximately 40%) with trilineage hematopoiesis, megakaryocytes present in adequate numbers with no overt atypia, mild increase in cosinophilic infiltrate, and no lymphoma, acute leukemia or high grade MDS seen morphologically or by flow cytometry. There was trace to absent storage iron. Based on all the presenting signs and symptoms, results of lab work and imaging and biopsy, the patient was diagnosed with Kikuchi lymphadenitis after thorough exclusion of other differential diagnoses (systemic lupus lymphadenitis, necrotizing lymphadenitis in Yersinia infection, EBV infection, acute leukemia, lymphoma, tuberculosis, myelodysplastic syndrome, etc.). Patient was treated with intravenous antibiotics and supportive care with intravenous hydration and analgesics. Patient's symptoms gradually resolved and she was discharged for outpatient follow up.

Discussion: KFD is a benign histiocytic necrotising lymphadenitis. KFD is rare, but most common in Asia. In the early 1970s both Kikuchi and Fujimoto first described cases of KFD in Japan. Its etiology has not yet been fully determined, however it is believed it may be of viral origin, EBV, HHV6 and 8 have been suggested. An autoimmune etiology is also likely as it has been reported in association with SLE. The most common signs and symptoms are lymphadenopathy, fever, sweats, malaise, anorexia, weight loss, hepatomegaly and leukopenia. A definite diagnosis is made by tissue biopsy, indeed whole lymph node biopsy. Histopathological assessment of affected lymph nodes reveals characteristic findings. As the symptoms are non-specific and some of the histological features are similar to other diseases it is easy to misdiagnose KFD with SLE or lymphoma. This is important as the treatment of KFD is symptomatic and supportive, spontaneous recovery is usual, while the latter two conditions require prompt specific treatments.