

## Gastrointestinal tract involvement of Langerhans cell histiocytosis

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**Background:** Langerhans cell histiocytosis (LCH) is a systemic disorder characterized by hyperplasia of reticuloendothelial cells that involves multiple organs, primarily bone and skin. Despite advances in understanding of the clinical features, the pathogenesis is still unknown. It is predominantly a disease of childhood, however it can also occur in adults. The incidence and significance of gastrointestinal lesions in adult LCH are unclear. Here we report a case of rather unusual gastrointestinal LCH from an asymptomatic adult.

**Case presentation:** A 37-year-old woman without underlying disease was admitted complaining of a palpable lump in the right submandibular area and chest discomfort. Laboratory test showed mild eosinophilia with 7% in peripheral blood. Chest computed tomography (CT) imaging showed a 3cm-sized right neck mass and mediastinum lymph node enlargement. We took the necessary tissue from the lesion using a puncture needle guided by the ultrasound. A histological examination revealed evident cells showing the typical characteristics of Langerhans cells in some specimens, with some cells found to have the following immunophenotype: S-100 protein positive, CD1a positive. The patient underwent gastroscopy and colonoscopy to evaluate for the possibility of LCH infiltration. The duodenofiberoscopy showed 1.2cm sized ulcerative polyp and multiple small erosions on the great curvature mucosa of midbody. The colonoscopy revealed 8mm sized mucosal elevation with central ulcer around the ascending colon. Biopsies of the gastrointestinal tract disclosed infiltrations of LCH. And Biopsies of the gastrointestinal tract are also found to have the following immunophenotype: S-100 protein positive, CD1a positive. We planned to treat him with chemotherapy.

**Conclusion:** Although gastrointestinal LCH lesions are rare, they were more common than expected in our case of multisystem LCH. Therefore patients diagnosed with LCH should undergo digestive tract biopsies to confirm LCH infiltration, even though it is normal or microscopic lesion on endoscopy.

