Langerhans Cell Histiocytosis (LCH) of the Tonsil in Adult Patient: An Uncommon Disease at an Uncommon Site

Rachna Khera¹ · Faiq Ahmed¹ · Sudha Murthy¹ · Krishna Mohan Mallavarapu²

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Abstract Langerhans cell histiocytosis (LCH) is a rare disease characterized by clonal neoplastic proliferation of normal antigen presenting cell (APC), the Langerhans cell. Most cases occur in childhood and the disease is rare in adults. LCH can involve solitary organ or can present as a multi-system disease in children. In adults, isolated pulmonary LCH is the commonest presentation. Tonsillar infiltration as a sole manifestation is extremely rare. We herewith report a case with isolated tonsillar involvement by LCH in an adult patient.

Keywords Langerhans cell histiocytosis (LCH) · Langerhans cell · Tonsils

Forty year old male presented with left neck swelling of 4 months duration, associated with difficulty in swallowing. CT scan revealed tonsillar swelling (Fig. 1). Patient underwent tonsillectomy. Histopathological examination revealed tonsillar tissue with nodules of closely packed large cells in a background of numerous eosinophils and plasma cells. The histiocytic cells exhibited characteristic irregular shaped nuclei, few being reniform, notched with coffee bean shaped nuclear grooves (Fig. 2a, b). IHC confirmed the histiocytic nature of large cells and were

Fig. 1 CT scan of the neck showing tonsillar swelling

positive for CD1a, CD68 and S100 (Fig. 3a–c). Complete blood counts were within normal limits. Bone marrow evaluation, USG abdomen, skeletal radiographic survey for

✉ Rachna Khera
rachnakhera@yahoo.com; wadhwa.rachna@gmail.com

¹ Department of Laboratory Medicine, Basavatarakam Indo-American Cancer Hospital and Research Institute, Hyderabad, India

² Department of Medical Oncology, Basavatarakam Indo-American Cancer Hospital and Research Institute, Hyderabad, India

Fig. 2 **a, b** H&E stained section showing tonsillar tissue lined by stratified squamous epithelium with subepithelium showing closely packed large cells in a background of numerous eosinophils and plasma cells. (100×, 400×)

Fig. 3 Immunohistochemistry (IHC) showing expression of CD1a (**a**), CD68 (**b**) and S100 (**c**) by large cells. (400×)

long bones and skull were carried out, all of which were unremarkable. Patient is on regular follow up and is doing fine 6 months post-tonsillectomy.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.