Unusual presentation of pediatric nasopharyngeal carcinoma as acute cervical lymphadenitis

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Abstract
Nasopharyngeal carcinoma (NPC) rarely appears in children under 14 years of age. A 11 year old child presented with bilateral cervical lymphadenitis which initially responded to intravenous antibiotics. No abnormality was detected on nose and throat examination. The patient underwent investigations for common infectious causes. Later a cytological examination of lymph node aspirate showed metatstatic deposits, probably of nasopharyngeal origin. Excision biopsy confirmed the diagnosis. Since, in paediatric age group lymphadenitis is mostly associated with upper respiratory tract infections, malignancy is usually not suspected. Therefore, diagnosis was delayed in this case. Clinical follow up of all cervical lymphadenopathies is thus important for diagnosis of such underlying conditions.

Keywords: Nasopharyngeal carcinoma, Paediatric, Lymphadenopathy.

Introduction
Lymphadenopathy refers to a condition or disease affecting the lymph glands of the body resulting in the lymph nodes that are abnormal in either size, consistency (how they feel to touch) or number. Enlarged and palpable lymphnodes commonly occur due to reactive hyperplasia of lymphoid tissue. The most common causes include- idiopathic (self limiting), upper respiratory infections, autoimmune diseases and rarely malignancy. Lymphadenitis is lymphadenopathy due to inflammatory processes resulting in swelling, pain, skin changes, fever, edema/pus collection over lymph nodes. The most common etiology for lymphadenitis in pediatric age group is infectious, often viral in origin.[1]

Nasopharyngeal carcinoma (NPC) is a tumour with an epithelial origin. In children it is different from the adult form by its association with Epstein–Barr virus (EBV) infection, its undifferentiated histology, and a high locoregional spread.[2] It rarely appears in children under 14 years of age.[3] Few etiological factors that have been linked to this disease include infectious mononucleosis, consumption of food rich in nitrosamines, and genetic and epigenetic factors that have not yet been clarified.[4]

The aim of this paper is to report that rarely acute cervical lymphadenitis may be a presenting feature of nasopharyngeal carcinoma as well as to discuss the diagnosis and management of these specific lesions.

Case Report
A previously healthy 11 years old boy was presented in paediatrics department for fever accompanied with painful swelling in both sides of neck since 10 days. On physical examination, right sided tender lymphadenopathy of size 4×4 cm and left sided 3×4 cm was present over level 2A was observed. Both swellings were non mobile, free from overlying skin, tender and firm in consistency. Oral cavity and oropharynx were normal. In blood indices, haemoglobin was 11.5gm, total leucocyte count was 15,600 and ESR was 24. DLC showed 90% neutrophils. All tests performed for TORCH infections, tularemia, cat-scratch disease, and tuberculosis were negative. Ultrasonography suggested ovoid hypoechoic lymphnodes present in bilateral upper cervical chain. Diagnosis of acute lymphadenitis was made and intravenous antibiotics were started (amoxicillin with clavulinic acid 30 mg/kg tds). Initially pateint showed response to treatment. There was reduction in the size of the lymphnodes in 4-5 days and the child became afebrile but difficulty in swallowing persisted. However, complete regression was not seen, and despite all treatment about

Lymphnodes of 2×2 cm size persisted. Otolaryngologist opinion was taken where FNAC was advised. FNAC showed metastatic deposits probably from nasopharyngeal carcinoma. Diagnostic nasal endoscopy was done and it revealed an irregular mass in nasopharynx obscuring bilateral Fossa of Rosenmullar. Biopsy was taken and sent for histopathological examination (HPE) which revealed nasopharyngeal carcinoma.

On CECT PNS, a large 3.0×5.9×3.7 (ap×tr×cc) soft tissue attenuation homogenously enhancing lesion was seen in the nasopharynx, displacing the bilateral parapharyngeal fat pad laterally. The lesion was extending upto posterior part of nasal cavity. Fossa of Rosenmullar was obliterated bilaterally. The lesion was extending to bilaterall tonsillar fossa with specs of calcification in this region. HPE of biopsy from nasopharyngeal mass revealed syncytial arrangement of cohesive cells with indistinct cell margins with moderate amount of eosinophillic cytoplasm, round vesicular nuclei, prominent nucleoli surrounded by lymphocytic infilterate suggesting nasaopharyngeal carcinoma, non-keratinising type which was EBV positive.

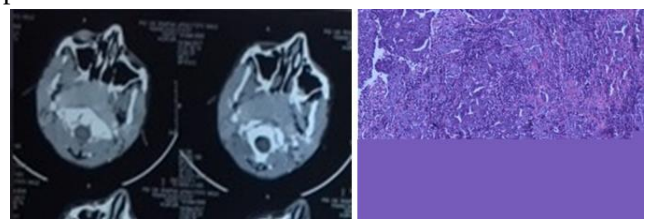

Fig. 1: Patient was sent for chemoradiation. Four cycles of chemotherapy with docetaxel, cisplatin, and fluorouracin were given and one cycle of radiotherapy was given to the patient.

Discussion

Lymphadenitis is defined as lymph node enlargement associated with tenderness, erythema and raised temperature. It is a common condition in pediatric age group. It has many etiologies as simple and easy to diagnose as upper respiratory tract infections and many very difficult to diagnose cases such as malignancies.[5,6] While making the diagnosis one must take into consideration the time duration, size, consistency, anatomical location and other investigations. Enlarged lymphnodes unresponsive to antibiotics should undergo ultrasonography and FNAC/biopsy to rule out malignancy.[7] In this case, lymphnode enlargement was associated with signs suggestive of acute infection i.e. tender lymphadenopathy with raised skin temperature, associated blood investigatioons suggesting acute inflammation. Also a short history and lack of other symptoms apart from fever favoured the diagnosis of an infective cause. Other systemic causes and common malignancies were ruled out by various investigations. Lymphadenopathy was initially responsive to systemic antibiotics.

NPC is a relatively uncommon malignancy in childhood accouting for less than 1% of all childhood cancers. Its clinical presentation varies with age, sex and location. In this case study, the child presented with cervical lymphadenopathy which is most common presenting feature of nasopharyngeal carcinoma but it was associated with signs and symptoms related to acute lymphadenitis like fever, tenderness and were responsive to antibiotics also. All signs were suggestive of an infectious cause. Since the fever subsided and there was reduction in size of the lymp nodes, patient was discharged from pediatric side and on follow up otolaryngologist opinion was taken because of remnant lymphadenopathy. Due to absence of any other suggestive signs or symptoms NPC could have been missed. The age of onset of NPC in this case was also unusual as it rarely occurs before 14 years of age.[3]

There are no clear separate guidelines for treatment of pediatric nasopharyngeal carcinoma. Treatment modalities follow its guidelines as per adults. Recently, studies on NPC treatment regimens have documented the advantage of co-administration of cisplatin-based chemotherapy and radiotherapy. The use of cisplatin-containing chemotherapy regimens have increased the survival in NPC up to 80%.[2,8]

Conclusion

Cervical lymphadenopathy is the initial most and most common presentation in NPC and diagnosis is made by FNAC or biopsy of this lymphnode followed by biopsy from nasopharyngeal mass. In this case study, diagnosis was made later, on the follow up because its signs and symptoms were resembling acute

lymphadenitis and it was also responsive to antibiotics. As malignancies like NPC are not suspected clinically until late, clinical follow up of all cervical lymphadenopathies is important for diagnosis of such underlying conditions.[9]

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Conflict of Interest
None.

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