

HIV Disease Presenting as a Unilateral Parotid Gland Swelling

Sir,

Human immunodeficiency (HIV) infection may present with a range of symptoms. About 40% of HIV-positive patients have head and neck related symptoms and signs. Parotid gland enlargement is seen in about 5% of this group.^{1,2} Here we report a case of two and half years old child presented with unilateral parotid gland swelling, subsequently found to be HIV positive. This is the youngest child with HIV disease, presenting as unilateral parotid swelling, according to documented medical literature.

A 2.5-year-old child came to the pediatric clinic with two months history of painless swelling over the right side of the face. It was not associated with fever, local redness, sinus formation or discharge. He was seen in the local health centre where he was given antibiotics, with no improvement. Perinatal history was insignificant. He was born full term, with good birth weight, diagnosed to have G₆PD deficiency and sickle cell trait. At the age of 8 months he had few episodes of upper respiratory tract infection (URTI) and features of upper airway obstruction. Adenoidectomy was done for him at the age of 1 year and 8 months. Four months later he was admitted and treated with antibiotics for a lower respiratory tract infection. The patient did not suffer weight loss, diarrhea, or excessive fatigue. He was developing and thriving well for his age. He has one sister who is 4 years old, and has had no major medical illnesses.

Physical examination showed an active child with normal weight and height. He had multiple cervical and axillary lymph nodes which were firm, non tender and not matted. The right parotid gland was enlarged 4 x 5 cm, firm and tender on deep palpation. Intra orally the mucosa was moist with no redness, and the duct was patent producing free and adequate salivary flow devoid of any pus discharge. The left parotid gland was not palpable. Abdomen was soft, and the liver was palpable, 2 cm below costal margin, firm and non tender. Spleen was not palpable. Other systemic examination was unremarkable.

Investigations showed mild hypochromic microcytic anemia, with normal WBC morphology. Electrolytes and LFT were normal. Serum iron was low, Sweat test was negative and basic extensive immunological work up was normal. Other investigations included CRP: 10 mg/l, (0 — 8), ESR 34 mm/hr, (0 — 15). ANA-negative and normal C3, and C4. Ultrasonography CT of the parotid glands showed enlarged right parotid gland which appeared hypoechoic. It contained multiple, small sonolucent areas,

with no fluid collection within or adjacent to the parotid. Multiple small lymph nodes were seen inferior to the parotid, possibly reactive. The left parotid gland was normal. HIV 1 antibodies and antigen were positive, confirmed by Western blot. Both the father and mother tested positive for HIV, but the sibling tested negative. Absolute value of CD4/CD8 count was 887/1872 and the ratio was 0.47. X-ray and CT scan of the chest were normal. FNAC of parotid was not done as parents refused.

The global epidemic of HIV infection remains one of the top health problems. According to UNAIDS (The Joint United Nations Programme on HIV/AIDS) at the end of 2007, an estimated 2.3 million children worldwide under age 15 were living with HIV/AIDS. Approximately 270,000 children under 15 had died from the virus or associated causes in that year alone.³ Most children (80-90%) with HIV-1 infection develop features of HIV-1 infection within the first year of life. Common manifestations in the first year are lymphadenopathy, splenomegaly, and/or hepatomegaly.⁴ However, infection with HIV presents itself with a myriad of symptoms. On reviewing the literature, it was found that as many as 5-10% of patients with HIV-1 infection have been reported to have parotid swelling with the incidence increasing to as high as 20% in AIDS patients.⁵ In children, it is recently reported that cystic parotid enlargements may be the first presentation of HIV infection.⁶

The present patient presented at age of 2.5 years old with unilateral parotid swelling where he did not show in the past any major medical illness apart from a respiratory infection, which responded well to antibiotics. He had features of upper airway obstruction for which adenoidectomy was done. On a recent retrospective review of fifty eight HIV-infected children (Madhivanan *P et al*⁷ it was shown that a common clinical presentation of patients with HIV included oral candidiasis (43%), pulmonary tuberculosis (35%), recurrent respiratory infections (26%), bacterial skin infection (21%), papulopruritic dermatitis (19%), hepatosplenomegaly and lymphadenopathy (14%) each and chronic diarrhea (7%).

It is postulated that parotid enlargement results from HIV replication within the five to 10 embryological derived lymph nodes within the parotid, causing lymphoproliferation.⁸ The T cell population within the cyst has been found to be CD8 positive and CD4 negative.⁹ The transient expansion of the CD8+ T cell pool normally occurs in the early phase of HIV infection. However, persistent expansion of this pool is observed, and it is related to two settings: diffuse infiltrative lymphocytic syndrome (DILS) and HIV associated CD8+ lymphocytosis syndrome.¹⁰ The parotids normally are affected bilaterally with occasional reports of unilateral

swellings.

The histopathogenesis of parotid lymphoepithelial cysts is still uncertain. The parotid swellings originate either as hyperplastic activity of intraglandular lymphocytes, and/or as an extraglandular infiltration into the salivary gland tissue.¹ Ihrler *et al*¹¹ demonstrated a secondary lymphatic infiltration of salivary parenchyma provokes a lymphoepithelial lesion of the striated ducts with basal cell hyperplasia. DiGiuseppe *et al*^{12,13} and other researchers showed benign lymphoepithelial lesions of the parotid gland associated with HIV infection results from the involvement of intra-parotid lymph nodes by persistent generalized lymphadenopathy.¹⁴

Isolated parotid gland enlargement could be the sole initial presentation of HIV infection in children. Recurrent parotitis is not uncommon in pediatric practice and we recommend routine screening for HIV in all children with parotid enlargement, with or without lymphadenopathy.

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