

## An HIV-infected child with recurrent parotitis: A case report

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### ABSTRACT

**Background:** Human immunodeficiency virus (HIV) infection in children causes a broad spectrum of diseases and varied clinical courses. Parotitis is one of the manifestations of paediatric HIV infection, occurs in 4-47% of children.

**Patient:** We present a 4-year old boy with recurrent bilateral parotitis. He had been admitted twice with the diagnosis of iron deficiency anaemia and chronic hepatitis. During the last admission for recurrent parotitis, based on clinical and paraclinical findings, he was suspected to have HIV infection that was finally confirmed with laboratory tests.

**Conclusion:** Despite low prevalence of HIV-infection among children, physicians should consider HIV infection in any pediatric patient who presents with unexplained signs and symptoms such as chronic or recurrent parotitis.

**Keywords:** Children, HIV infection, Parotitis.

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### INTRODUCTION

HIV infection is rapidly becoming a major health problem in children (1). Pediatric AIDS was first defined in 1985 (2). In June 2005, Center for Diseases Management in Iran has reported 11,221 patients with HIV/AIDS, including 68 children younger than 15 years (%0.8) since 1986. Most of these children acquired HIV infection perinatally (3).

Vertical transmission from an infected woman to her infant was estimated in about %0.4 of total cases (3). The clinical manifestations of HIV infection vary widely among infants, children and adolescents. Initial symptoms may be subtle, such as lymphadenopathy and hepatosplenomegaly or nonspecific such as failure to thrive.

Symptoms that are found more commonly in children include recurrent bacterial infections, chronic parotid swelling, lymphocytic interstitial pneumonitis (LIP) and early onset of progressive neurologic deterioration (1). Parotid enlargement occurs in approximately 0.8% of adults and 4-47% of children with HIV infection (4). Parotitis can be chronic, while it's often associated with lymphocytic interstitial pneumonitis (5).

We report a case of recurrent parotitis in a 4-year old boy, whose parents were apparently healthy.

### PATIENT

A 4-year old boy was referred with 9 months history of recurrent bilateral parotitis. He had been admitted in Mofid Children's hospital twice when he was 19 and 39 months old. Firstly, he had iron

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deficiency anemia and hepatosplenomegaly, while during the second stay he was diagnosed with chronic hepatitis. During that period parotid glands were waning and waxing in size, thus, he was admitted again to be investigated thoroughly.

His weight and height was on 50<sup>th</sup> and 25<sup>th</sup> percentile, respectively. On examination there were bilateral parotid swelling measuring 5×5cm, without fluctuation and erythema. There was no evidence of mucosal inflammation and any discharge around stenson's duct. Palpation was slightly painful. The glands were smooth and rigid. He had hepatosplenomegaly as well, but other findings were within normal limit.

He had normochromic microcytic anemia with normal white blood cell count. CRP was (+3) and ESR was 105 mm/hour. Chest X-ray showed diffuse bilateral reticulonodular pattern (milliary pattern), but gastric washing for BK and mantoux test were negative. Cervical sonography revealed an echogenic mass with cystic component without vascular flow at the right side of the neck, probably separated from parotid.

Parotid biopsy indicated fragmented lymph node containing lymphoid follicles with reactive germinal centres and foci of widening of paracortical area. In some areas, small lymphocytes appear to penetrate the germinal centres resulting in folliculolysis. There was also proliferation of finely arborizing vessels, with neither granuloma nor evidence of salivary gland tissue. The diagnosis was reactive lymph node.

In spite of his healthy parents, and lack of previous history of transfusing blood or blood products, he was suspected of having HIV infection, solely based on his signs and symptoms and paraclinical findings. Unfortunately, CD4/CD8 count indicated an increase in CD8 T-cells and decrease in CD4 (18.9% and 9.7%, respectively). Meanwhile, he was seropositive for HIV-ELISA test that was finally confirmed with western blotting. Thereafter, his parents were also positive for HIV infection. The patient was treated with

Nelfinavir, Lamivudin and Zidovudin. His parotid swelling decreased and his condition improved.

## DISCUSSION

In Iran, the prevalence of HIV infection is low especially in children. The HIV/AIDS patients refer to the physicians with several unusual signs and symptoms, however, the clinical findings of HIV infection vary widely among children (1). Bilateral parotid swelling, presented as an oral manifestation of HIV, occurs more frequently among HIV-infected children (4,6,7). In Katz et al study, the cumulative prevalence of lesion was 72% for oral candidiasis and 47% for parotid enlargement in children with perinatally acquired HIV infection (8). Growth of the parotid is secondary to infiltration of CD8 lymphocytes into the gland, follicular hyperplasia of intraparotid lymphoid tissues (as occurs in lymph nodes throughout the body in HIV infection) and development of diffuse intraparotid lymphoepithelial cysts (2).

The development of lymphoreticular cysts of the parotid gland occurs early in HIV disease (7). In our patient, sonography revealed these cysts. Parotid gland cysts are usually accompanied by an increase in CD8 T-lymphocytes and presence of lymphocytic interstitial pneumonitis (LIP).

Parotid enlargement is often the first manifestation of HIV infection acquired perinatally in an otherwise healthy child (2). Some studies reported a median time of 4.6 years from birth to development of parotid enlargement in children with perinatally HIV (5). Meanwhile, a median time of 5.4 years was also reported from parotid enlargement to death (8).

In an African study, parotitis had 67% positive predictive value (PPV) for diagnosis compared to 47% for chronic diarrhea and 53% for oral candidiasis (3). According to the HIV classification system in children aged less than 13 years (9), our patient is categorized in A3 group because of the

presence of lymphadenopathy, parotitis, hepatomegaly, splenomegaly and severe immunosuppression (CD4<15%).

Despite low prevalence of HIV-infection among children, physicians should consider HIV infection in any pediatric patient who presents with unexplained signs and symptoms such as chronic or recurrent parotitis and chronic interstitial pneumonia.

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