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Research Article

MISDIAGNOSIS OF INFANT HISTOCYTIC NECROTIZING LYMPHADENITIS: A CASE AND LITERATURE REVIEW

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ABSTRACT

Histiocytic necrotizing lymphadenitis (HNL) is a self-limiting non-tumor reactive disease of unknown etiology, which may be related to viral infection and allergies. The typical clinical manifestations are cervical lymphadenopathy, fever, rash, etc. Usually adults under the age of 30, mostly women aged 20-35, infants and young children have no relevant reports. This article reports on the clinical data of an 8-month-old infant with tissue necrotizing lymphadenitis, provide reference for clinical.

Key words: Histiocytic necrotizing lymphaden; Kikuchi Fujimoto disease; infant; lymph node tuberculosis; misdiagnosis

CASE PRESENTATION

The child, 8 months and 23 days old, was hospitalized for fever for 6 days. There was no obvious cause of fever 6 days, the highest temperature was 37.6 ℃, no fear of cold, no cough, no eating, no crying, no vomiting and diarrhea. After taking antipyretic drugs at home for 2 days, the peak temperature was higher and the interval time was shorter than before, and the neck mass was found. The patient was hospitalized in the local people's Hospital and treated with amoxicillin and clavulanate potassium for 2 days, the child still had fever, the neck mass was larger than before, and there was crying when touching it. Refer to our hospital for diagnosis and treatment. Physical examination: T 37.3 ℃, P 132 times/min, R 25 times/min, BP 82/63mmHg, Weight 7.5kg. Consciousness, normal development, good nutrition, no rash and bleeding point, the left neck can touch a 2 * 2cm mass, soft in quality, movable, no adhesion, fusion, skin temperature is not high, clear boundary, no mass touched on the right neck. Red lips, bayberry tongue, throat congestion, no purulent secretions. On auscultation of the lungs, the breath sounds were coarse, and no rales were heard. The heart rate was 132 beats/min, the heart sound was powerful and regular, and no pathological murmur was heard. The abdomen was soft, the mass was not touched, the liver and spleen were not touched under the ribs, the bowel sounds were normal. The limbs were warm without patterns, the physiological reflex was normal, and the pathological reflex was not elicited.

The results of nine antibody test of respiratory virus in local hospital showed that the antibody IgM of influenza B virus was positive; Color Doppler ultrasound: cervical lymph node enlargement. The complete blood routine: the total number of white blood cells was 7.00×10^9/L, the red blood cell count was 3.68×10^{12}/L ↓, the platelet count was 367×10^9/L ↑, the hemoglobin was 93.00 g/L ↓, the percentage of neutrophils is 44.40 %, the percentage of lymphocytes was 40.10 %, and the percentage of monocytes was 14.40 %. Erythrocyte sedimentation rate (ESR) was 28 mm/H ↑, C-reactive protein (CRP) was 22.32 mg/L ↑, cell morphology: heterotypic lymphocyte 1%. Immunoglobulin 4 items: immunoglobulin E (IgE) 65.50 IU/mL, immunoglobulin M (IgM) 1.06 g/L, immunoglobulin G (IgG) 3.29 g/L↓, immunoglobulin A (IGA) < 0.279 g/L ↓, anti "O" (ASO) < 50.6 IU / ml. Thyroid function: TSH 0.9030 μIU/mL, FT3 3.19 pg/mL, FT4 10.94 pmol/L. The liver and kidney function, electrolytes, coagulation function, autoimmunity and ASO were normal, anti-Mycoplasma pneumoniae antibody IgG + IgM, EBV antibody and PPD were negative. No obvious abnormality was found in heart, abdomen and joint. Color Doppler ultrasound showed that multiple lymph node echoes could be seen in the left cervical area II, III and IV, with clear boundary and unclear display of lymphatic hilum. One of them was about 10 * 8mm in size, and there was no obvious enlarged lymph node echo in the right neck. Consider the diagnosis: 1. Acute cervical lymphadenitis, 2. Acute pharyngitis, 3. Influenza (B virus), 4. Mild anemia. He was treated with ceftazidime, amoxicillin and clavulanate potassium for anti-infective treatment, and oseltamivir antiviral symptomatic and supportive treatment, the peak temperature gradually decreased, the body temperature was normal on the fifth day of admission, and night sweats were obvious. The skin rash appeared on the 7th day, and the whole body was diffusely distributed with a piece of red rash, partly merged, and the color faded and increased gradually. On the 9th day, the results of the right cervical lymph node puncture

biopsy: fibrous tissue and lymphatic tissue with local necrosis were seen under the specimen microscope, which was considered as reactive hyperplasia-histiocytic necrotizing lymphadenitis (left neck). Immunohistochemistry: CD3 (+), CD20 (+), CD21 (+) display FDC network, CD30 (-), PAX-5 (+), Ki67 Li about 30%, in situ molecular hybridization: EBER (-). Modified diagnosis: histiocytic necrotizing lymphadenitis (HNL), so the amoxicillin and clavulanate potassium were discontinued. In order to further clarify the cause of HNL, we improved five items of TORCH and hepatitis B, excluding anemia caused by other causes, and improved three items of anemia, the three items of total iron binding capacity, and the count of reticulocytes were not significantly abnormal. Re-examination of cervical lymph nodes: multiple enlarged lymph nodes echoes could be seen in the left neck, one of which was about 11 * 6 mm in size, and several enlarged lymph nodes could be seen on the right side, one of which was about 9 * 5 mm in size. The boundary between the skin and medulla was clear, and lymph nodes can be seen. Reactive hyperplasia may be caused by swollen lymph nodes on both sides of the neck. However, considering that the Child's body temperature has stabilized, the neck mass has subsided from the previous of the drug, and the side effects of drugs, hormone therapy has not been given for the time being.

DISCUSSION

The etiology of HNL is unknown and may be related to viral infection and allergies. The patient has a complete respiratory virus nine-fold antibody test outside the hospital: influenza B virus antibody IgM is positive. After admission, complete the autoimmune suite, ASO, TORCH, and hepatitis B are normal. Anti mycoplasma pneumonia antibody IgM, TORCH and EBV antibodies are negative, so the current consideration is mainly related to B infection. The typical clinical manifestations of HNL were cervical lymph node enlargement (79%– 94%), fever (35%–67%), rash (4%–32.9%), arthralgia (7%–34.1%) and hepatosplenomegaly (3%–14.8%). Other uncommon symptoms included weight loss, digestive symptoms, weakness, night sweats, upper respiratory symptoms and sore throat[1,2,3]. Compared with adults, systemic manifestations such as fever and rash are more common in children [4]. The child has a long heat course, variable heat type, swollen lymph nodes on both sides of the neck, a rash during the course of the disease, a diffuse red rash all over the body, and obvious night sweats. Laboratory tests included mild anemia, elevated ESR (78.9%), elevated CRP (38.3%), and other findings included leukopenia (20% - 58%) and polycythemia (2% - 5%). IAccording to reports, as many as one-third of patients have atypical lymphocytes in the peripheral blood [5]. The patient's complete blood routine showed mild anemia, ESR 28 mm/H↑, CRP 22.32 mg/L↑, and cell morphology showed 1% heterotypic lymphocytes. After combined treatment with antibiotics, the temperature of the child was still repeated, suggesting that antibiotic therapy was ineffective. Histopathological examination and immunohistochemistry showed histiocytic necrotizing lymphadenitis.

HNL is distributed globally and has a higher incidence among Asians, it is usually of adults under 30 years old [6], Most women are 20-35 years old. The influence of female sex hormones may play a role in HNL [7]. Studies have shown that high-febrile lymphadenopathy occurs in young women, prone to autoimmune diseases

[8], such as systemic lupus erythematosus (SLE), Sjogren's syndrome, etc. HNL is easy to be misdiagnosed as simple lymphadenitis, lymph node tuberculosis, lymphoma, etc. Histopathological examination is an important means of diagnosis and differential diagnosis.

By consulting the literature, there are very few cases of infants. This article reports a case of infants aged only 8 months and 23 days. In the future clinical work, children with persistent low fever and lymph node enlargement need to consider this disease. The improvement of lymph node biopsy and examination techniques has contributed to the early diagnosis and treatment of this disease. HNL is a self-limiting disease, antibiotic therapy is ineffective. Early use of hormones can shorten the course of the disease, reduce lymph node enlargement, and prevent complications and recurrence. The disease requires long-term close follow-up.

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