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A Rare Case of Cat Scratch Disease

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Abstract: Cat scratch disease (CSD) is a sub acute regional lymphadenitis caused by Bartonella henselae. CSD is more common among children and boys are affected often than girls. A 11 year male child presented with swelling of left side of neck for 2 months ,tenderness of the same area for 1 ½ months and low grade fever for 2 months, with the history and physical examination of the patient our differential diagnosis was tuberculosis, lymphoma and CSD. He had only a history of contact with cat but no history of bite. Lymph node biopsy revealed it was a case of CSD .The child's signs and symptoms improved with Azithromycin. The rarity of the condition prompted us to document the problems faced in establishing a diagnosis of CSD in a young boy who presented with cervical lymphadenopathy.
Keywords: Cat scratch disease, Fever, Lymphadenopathy.

INTRODUCTION

CSD is a benign infectious disease caused by the intracellular bacterium Bartonella henselae. It is most commonly found in children following a scratch or bite of a cat. It was first discovered in 1889 by Henri Perinaud [1]. It occurs world wide with no racial predilection.

CASE REPORT

A 11 year old previously healthy boy admitted in SCBMCH, Cuttack, Odisha Paediatric department with complain of swelling of left side of neck, tenderness of same area for 1 ½ months and low grade fever for 2 month , with no history of gradual weight loss, no night sweating, no abdomen pain or fullness of abdomen. He did not notice similar swelling anywhere in his body. There was no history of contact with tuberculosis . The boy was fully immunised and BCG scar was present. There is history of contact with cat 3 months back; he used to play with kitten .But there is no history of cat scratch or bite on his body.

On physical examination –The boy height was 140cm, weight 32kg. Afebrile, HR=88/min, RR=15/min , BP=102/68 mm of Hg.

A swelling was found on left side of neck(Figure 1) .Unilateral lymphnode was palpable of middle jugular group, 3 in number maximum of 3 x 2 cm size ,tender .Abdomen was soft and nontender without organomegaly. No mark of cat scratch or bite was present in upper limb.Other systemic examination revealed no abnormality.

Investigation revealed moderate leukocytosis 12200/mm3 (neutrophils 66%, lymphocyte 28%, monocyte 2%, eosinophils 4%) peripheral blood smear showed normocytic normochromia, no atypical cells, platelets 2.4 lacs /mm3, ESR 40 mm in first hour, HIV negative, serum bilirubin 0.4 mg/l, SGOT 50 iu/l, SGPT 24 iu/dl, ALP 183iu/l. Mantoux test was negative (5 mm), Xray chest was normal. USG of swelling revealed lymphnode 3 in number maximum of size 3x2 cm. FNAC of lymphnode revealed nonspecific inflammatory lesion. Biopsy of lymphnode revealed fibrocollagenous capsule over lymphoid cells with stellate shaped area of necrosis with neutrophil with necrotic debris surrounded by foamy histiocyte suggestive of Cat scratch disease(Figure 2) .

The patient completed treatment with Azithromycin for 5 days .Over next 2 weeks the lymphadenopathy began to subside and almost disappeared after 2 month.

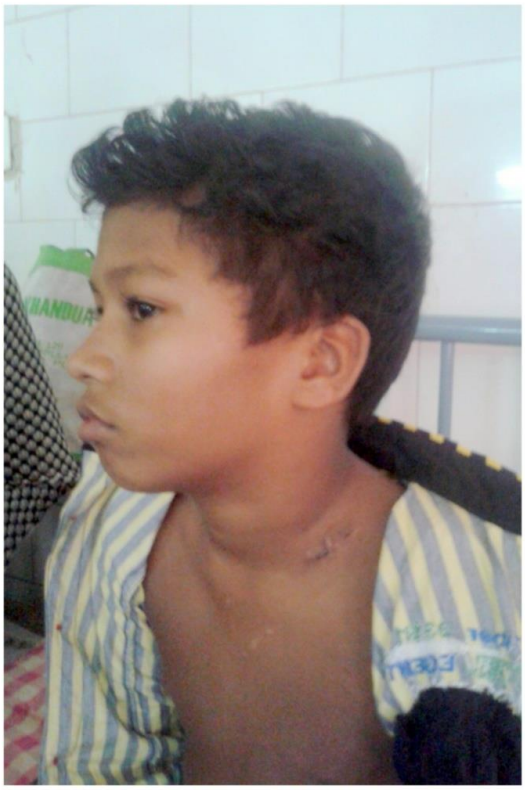

Fig-1: Cervical lymph node swelling with biopsy scar mark

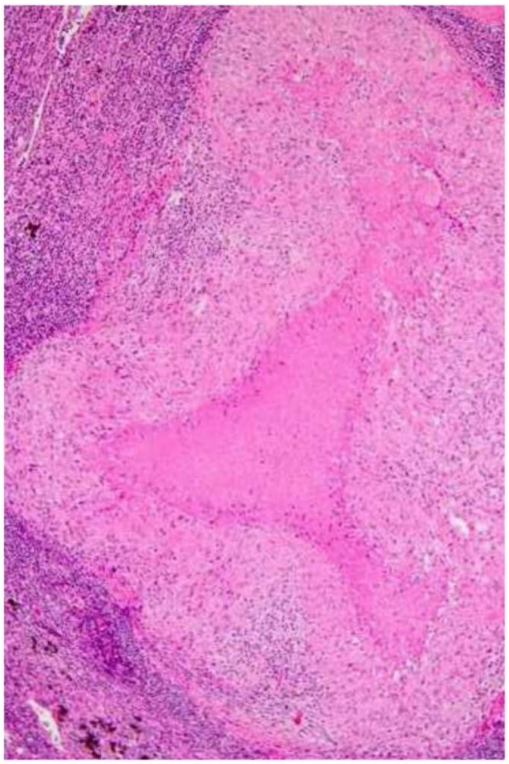

Fig-2: Biopsy revealing caseation necrosis

DISCUSSION

Lymphadenopathy can occur due to various causes which show significant overlap in clinical presentation and clinical examination .Persistent and progressive lymphadenopathy pointed to rule out tuberculosi, Lymphoma, other infection from staphylococcus, streptococcus as well as CSD .CSD is common with more than 24000 estimated cases per year in USA. Most patient have had contact with cats may be of which are kittens < 6 months of age and > 50% have a definite history of a cat scratch or bite [2].Though there is no epidemiological data of CSD in our country .Classic CSD present as tender and swollen regional lymphnode some patient have fever .Most cases are benign and self limited but lymphadenopathy may persists for several month after other symptom disappear.

Atypical CSD

1. Perinaud's occuloglandular syndrome- a granulomatous conjunctivitis with concurrent swelling of the lymphnode near the ear.
2. Optic neuritis
3. Stellate macular retinopathy
4. Bacillary peliosis- liver and spleen primarily affected in immunocompromised patient [3]
5. Granulomatous osteolytic lesion.
6. Acute encephalopathy- manifest 1-3 weeks after the onset of lymphnode swelling, sudden onset of neurologic dysfunction presenting as a meningitis with fever, headache and impaired vision.[4]

The diagnosis of CSD is clinical with lab evaluation to confirm the initial suspicion .Isolation of B.henselae provides a definitive diagnosis but it is very difficult to isolate .Additional testing such as the B. hensellae Ab test, warthin starry stain, PCR may be used as adjunct to the diagnosis. The regional lymphnode demonstrate follicular hyperplasia with central stellate necrosis with neutrophil surrounded by histiocyte and sinuses packed with lymphocyte usually without perifollicular and intrafollicular epitheloid cell .

Antibiotic treatment in CSD is not always needed and not clearly beneficial. A small prospective study of Azithromycin showed a decrease in initial lymphnode volume by 50% during 1st 30 days but after 30 days there was no change in lymphnode volume [2]. Current recommendation for CSD is 5 days of Azithromycin with alternative including clarithromycin, Trimethoprim-sulfamethoxazole, ciprofloxacin, rifampicin and gentamicin. Suppurative lymphnode that becomes tense and extremely painful should be drained by needle aspiration. Child with bacillary CSD respond well to rifampicin either alone or in combination with trimethoprim-sulfamethoxazole.

CONCLUSION

The presentation of unilateral lymphadenopathy although typical of CSD did not arouse this clinical suspicion because of relative rarity of the CSD in our country. A diagnosis of CSD needs to

be entertained in a child who presents with unilateral lymphadenopathy to minimise empirical antitubercular treatment in persistent lymphadenopathy.

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