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Letters to the Editor

9 April 2010

Dear Editor,

IMMUNE THROMBOCYTOPENIC PURPURE AND COELIAC DISEASE

Immune thrombocytopenia purpura (ITP) is the most common cause of acute onset thrombocytopenia in a previously healthy child. The peak age of occurrence is 2 to 5 years and both the sexes are equally affected. Severity of bleeding is usually proportionate to platelet count.[1] Actually, it is well known that ITP is an autoimmune disorder due to autoantibody binding to platelet antigen and causing their premature destruction by the reticuloendothelial system.[2] Similarly, coeliac disease (CD) is also an immune mediated enteropathy caused by permanent sensitivity to gluten in genetically susceptible individuals.[3] Co-occurrence of CD and other autoimmune disorders such as idiopathic pulmonary haemosiderosis, autoimmune thyroiditis and Evans syndrome have been widely described in literature.[4] However, in child with ITP, co-occurrence with CD has been rarely reported, underlying the importance of autoimmune phenomena in this disorder. We report a new paediatric case of ITP associated with coeliac disease.

A 12-year-old female was admitted for evaluation of recurrent abdominal pain, pallor and purpura that had been evolving over the previous 2 months. She weighed 34 kg, stood at 1.55 m and had a temperature of 37°C. Physical examination noted mucosal pallor, tachycardia, a systolic heart murmur without signs of heart failure and petechial purpura in lower extremities. Blood pressure was 90/50 mmHg. The remaining physical examination was normal. The child had no signs of malabsorption. Urine examination showed no haematuria. Complete blood count showed moderate microcytic hypochromic aregenrative anaemia (8.7 g/dL) and severe thrombocytopenia (6000 per mm^3). Iron investigation showed hyposideremia at 2 µmol/L, total capacity of serum fixation at 73.2 µmol/L and transferrine saturation coefficient at 2.7%, compatible with iron deficiency. Bone marrow aspiration showed an increased number of megakaryocytes with normal granulocytic and erythrocytic series. Serum antinuclear antibody, serum immunoglobulin and complement rates were normal. A diagnosis of acute ITP was made. Since associated recurrent abdominal pain and anaemia, investigations for CD were performed. Serum Ig A antibody to tissue-transglutaminase was positive at a title of 120 UI/mL (normal: 0–10 UI/mL). A duodenal biopsy revealed total villous atrophy associated with an increased number of intraepithelial lymphocytes, crypt hyperplasia and inflammatory infiltration in the mucosa, consistent with a diagnosis of CD. The child received a gluten-free diet and iron supplementation. The clinical course of both CD and ITP improved without recurrence of abdominal pain and purpura over a 24-month follow-up. Haemoglobin at 12-month follow-up is 14 g/dL and platelet count is around 200 000 per mm^3. Antiendomysial antibody titres have declined to 20 UI/L, indicating compliance with gluten-free diet.

Stenhammar and Ljunggren[5] described the first case report of the coexistence of ITP and CD in a child. In literature, CD as a risk factor for the development of ITP is controversial. Rischewski *et al.*[6] investigated the co-occurrence of CD and ITP/Evans syndrome in a pilot study, and concluded that neither typical nor atypical CD is a major risk factor for the development of ITP. Interestingly, our case report suggests that treatment of CD with a gluten-free diet may improve ITP without the need to use corticosteroids or immunoglobulin. In fact, our patient has remained well without recurrence of purpura and thrombocytopenia on a gluten-free diet for 12 months.

To conclude, our case shows that CD should be especially looked for in patients with ITP since both diseases may benefit from a gluten-free diet. Report of other cases may clarify the aetiopathogenic link between CD and ITP in child.

Dr Saber Hammami
Dr Samir Hadded
Dr Khaled Lajmi
Dr Leila Ghédira Besbès
Dr Chebil B Meriem
Dr Slaheddine Chouchane
Professor Mohamed Neji Guediche
Paediatric Department
Fattouma Bourguiba Hospital
Monastir
Tunisia

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9 April 2010

Dear Editor,

LANGERHANS CELL HISTIOCYTOSIS OF THE EYELID

We present an unusual case of Langerhans cell histiocytosis (LCH) masquerading as a non-resolving chalazion, which was successfully treated with excision biopsy and intralesional corticosteroid.

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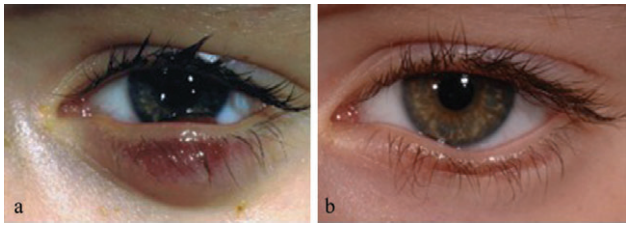

Fig. 1 (a) left lower lid lesion on presentation (b) left lower lid following excision and intra-lesional steroids.

A 7-year-old boy presented with a few weeks history of a left lower lid mass. This started as a tiny painless nodule and gradually increased in size. This was diagnosed as a chalazion and treated conservatively. As the lesion increased further in size, the patient was referred for further evaluation. There was no past medical history of any significant co-morbid conditions or localised trauma.

On examination, a dark red kidney bean-shaped mass measuring 1 cm × 0.75 cm was felt over the lower lid (Fig. 1a). The mass was non-mobile and extended up to the lid margin. There were no signs of infection or ulceration of the overlying skin. General examination revealed no lymphadenopathy or organomegaly. Initial haematological investigations were normal. Due to the unusual appearance of this lesion, an incisional biopsy was arranged.

Histopathological examination revealed the presence of chronic inflammatory infiltrate of large histiocytic cells with partly frothy eosinophilic cytoplasm, strongly positive for the marker s-100, consistent with the diagnosis of LCH. Computerised tomography (CT) scan of the head and its orbits revealed no orbital extension. Chest CT scan and skeletal survey were normal.

The staging process had revealed localised LCH affecting the left lower eyelid only. During the investigation period, the lesion increased in size to 1.5 cm in width, height and depth. Localised excision combined with intralesional injection of steroid was subsequently planned. A solid mass was found adherent to the anterior tarsal plate extending up to the lid margin. The tarsal plate was thickened. The lesion was debulked and 0.2 mL of 40 mg/mL triamcinolone acetonide was injected into the local tissues.

Upon review 2 days postoperatively, only minor irregularity of the lid margin was noted. There had been significant reduction in the size of the initial lesion. Further resolution occurred over the following two-week period (Fig. 1b). At three-month follow-up, there has been no evidence of recurrence.

Langerhans cells (LC) normally occur in body surface tissues such as epidermis, conjunctiva, corneal limbus, and epithelium of the respiratory tract. They are especially numerous in the dermis of normal eyelid margin skin where the tumour in this case would have originated.[1] LCH is characterised by an aberrant proliferation of LC and is part of a group of clinical syndromes known as the histiocytoses. The incidence of LCH is 4.6 per million children (age 0–14 years).[2]

LCH comprise a wide spectrum of clinical manifestations ranging from solitary lesions that usually exhibit benign clinical behaviour to widely disseminated lesions that may exhibit a malignant course. Tissues characteristically involved in LCH are bone, skin, lung, liver, spleen, bone marrow, lymph nodes and the hypothalamic-pituitary region, although involvement of other organs such as bowel can occur.[3]

Depending on tissue involvement, LCH has been traditionally divided into single-system and multisystem disease. In the case of single-system disease involving bone or lymphoid tissues, several sites may be affected, and the staging is then classified as multifocal, single-system disease. In the setting of multisystem disease, involvement of certain tissues – bone marrow, liver, spleen and lungs – so called risk organ positivity, are associated with a worse prognosis.[3]

The exact pathogenesis of LCH remains unknown. Debate exists as to whether this process is reactive or neoplastic.[4] Although clinical manifestations vary and often overlap, histopathological features tend to be similar. The hallmark of LCH is the presence of Birkbeck granules on electron microscopy.[5] The diagnosis of LCH is also confirmed by the presence of CD1a or CD207 (Langerin) positive histiocytic cells.[2]

In general, the treatment of LCH depends on the site and severity of the disease process. In the isolated skin lesions, minimal therapy with topical emollients may be sufficient. Carcinostatic agents, irradiation and steroid therapy are employed in cases with multisystem disease with bone involvement and/or haepatosplenomegaly.[4,5] Irradiation and chemotherapeutic agents, although very effective, risk subsequent development of secondary malignant neoplasms. In isolated LCH excision alone or in combination with topical oral steroid therapy, there have been found to induce complete remission, thereby avoiding irradiation and chemotherapeutic agents.

The use of intralesional corticosteroid in the treatment of Langerhans cell histiocytosis lesions has been previously advocated and especially used for osseous lesions.[3] In this case, we found the combination of surgical excision and intralesional steroid enough to induce complete remission, and therefore, avoiding long-term treatment with systemic steroids and their associated side effects.

In summary, LCH, although a rare disease entity, should be considered in the differential diagnosis of eyelid lesions. This case demonstrates that selected patients with unifocal cutaneous LCH may be a good candidate for a trial of intralesional corticosteroid therapy in combination with surgical excision. Careful long-term follow-up is required to ensure complete remission.

Dr Nabil El Hindy[1]
Dr Jong Min Ong[1]
Dr George Kalantzis[1]
Dr Robert Philips[1]
Dr Bernard Chang[2]
[1]Specialist Registrar
[2]Consultant Ophthalmologist
Ophthalmology Department
St James University Hospital
Leeds
United Kingdom

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31 March 2010

Dear Editor,

BORNHOLM DISEASE – A PEDIATRIC CLINICAL ENTITY THAT CAN ALERT A THORACIC SURGEON

We are sending this correspondence in order to present our experience on the rarely encountered epidemic pleurodynia, also known as epidemic myalgia or Bornholm disease; in addition, we are releasing to the public the method of intercostal xylocaine infiltration, which has already been applied in other cases of thoracic pain but was, to the best of our knowledge, for the first time recruited for the treatment of severe pain in patients of the kind. Bornholm disease is characterised by the sudden onset of chest pain accompanied by fever; it was first described in the late 1800s.[1] This clinical entity occurs in hot, humid environments after physical activity and has been attributed to subacute viral infection from various agents (Coxsackie A and B virus, echovirus). It appears with severe symptoms that alarm the patient to seek urgent medical attention. Reports of occurrence of the syndrome in the Danish island of Bornholm established the name 'Bornholm disease'. Occasional references to the disease have since then been published in different parts of the world, all attributing the entity to viral infections.[2–4] Apart from the symptoms of chest pain, upper abdominal pain, headache, flu-like symptoms including fever and optic neuritis can be a part of the clinical image.[2–4] Rarely, complicated variants of the disease include involvement of the heart in the form of cardiomyopathy.[5]

A case of the disease we dealt with concerned a 10-year-old male Caucasian patient with free personal history who was referred to us from paediatric colleagues due to 'unexplained' severe chest pain and a less prominent headache, which occurred during his summer holidays at a sea resort. The symptoms initiated at the same day. The pain was more intense in the left side of the rib cage – constant, but with exacerbations during respiratory movements. The child and his grandmother, who accompanied him, stated that there had been no incident of traumatic injury during the last few days. The child had no fever or pathological signs from physical examination, including neurological and ophthalmologic examination with fundoscopy. As cardiothoracic surgeons, we were called in regard to the treatment of a possible blunt traumatic injury or some kind of pneumothorax, probably a tension one, which could, however, be excluded from the normal findings in physical examination and the negative findings on the X-ray that was subsequently performed. An echocardiographic control and chest computed tomography also took place, but revealed no pathologies. As the clinical image matched that of Bornholm disease, we concluded to this diagnosis. For the treatment of pain, we applied a method used in other cases of thoracic pain, more specifically the infiltration of the intercostal nerves with 2% xylocaine infusion (5 ml dissolved in 10 ml NaCl 0.9%), with satisfactory outcome. The patient was released 2 days later with continuation of the administered oral anti-inflammatory agents (ibuprofen 150 mg, every 6 h) and guidelines for rest and follow-up control after a few days. Prior to discharge, blood samples for serological examination had been taken.

The serology results were positive for IgM Coxsackie virus antibodies. The boy was fit at the follow-up controls 2 and 7 days after discharge; these developments confirmed the diagnosis of Bornholm disease, which is both of viral aetiology and of a temporary course. An echocardiographic examination 3 months later revealed no pathologies.

In conclusion, due to the temporary and benign course of the syndrome, the thoracic surgeon must be aware of its existence and also keep in mind the method of intercostal xylocaine infiltration, which will relieve him and the patient from unnecessary stress and trouble.

Dr Tagarakis I Georgios[1]
Dr Karangelis Dimos[1]
Dr Tsolaki Fani[2]
Dr Dikoudi Maria[1]
Dr Koufakis Theocharis[1]
Dr Mouzaki Konstantina[3]
Prof Tsilimingas Nikolaos[1]
[1]Department of Cardiovascular and Thoracic Surgery
University of Thessaly
Larissa
[2]Department of Ophthalmology
Hippokrateion General Hospital
Thessaloniki
[3]Department of Paediatrics
General Hospital of Katerini
Katerini
Greece

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