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A unique presentation of benign acute childhood myositis in a child with influenza B.

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Abstract

Benign Acute Childhood Myositis (BACM) is a syndrome of a self-limiting muscle disorder characterized by bilateral calf pain and difficulty in walking with an isolated finding of elevated serum Creatine Phosphokinase (CPK) and leukopenia preceded by influenza like illness. The symptoms of BACM tend to disappear within a week. The syndrome has classical clinical and laboratory features that may allow for a correct diagnosis. Herein we describe BACM in an 11-year old boy with recurrent tonsillitis associated with vague muscle aches and discovered to have vitamin D deficiency with hypocalcemia. He had unique features that include persistence of symptoms beyond a week, recurrent episodes per year, and a concurrent similar case in the family. Awareness of the symptom complex is important for early diagnosis and avoidance of unnecessary investigations and treatment.

Keywords: Calf pain, Myositis, Creatine phosphokinase, Influenza B.

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Introduction

Benign Acute Childhood Myositis (BACM) is a rare syndrome of muscle disorder that predominantly affects school age children. It was first described as'Myalgia Cruris Epidemica' by the Swedish physician Lundberg in 74 Swedish children in 1957 [1]. It has an incidence of 2.6 cases per 100 000 children under 18 years old during epidemics, prevalence of 3.1 per 10000 in those <12 years of age, and its incidence is high in winter and spring [2-4].

It is characterized by sudden onset of prodromal influenza-like illness, bilateral calf pain, tenderness, inability to walk, and normal neurological exam associated with elevated Creatine Phosphokinase (CPK) level, Aspartate Aminotransferase (AST) level and leukopenia. Typically, it develops during the convalescence phase of a febrile upper respiratory tract infection, most commonly after primary infection with influenza B [5].

It occasionally occurs after parainfluenza, influenza A, Respiratory Syncytial Virus (RSV), Mycoplasma pneumoniae, and adenovirus, enterovirus, or dengue virus infections. Typically, the illness is self-limiting and patients recover spontaneously in about a week [5].

No specific therapy, only symptomatic therapy is required during the acute illness and antivirals are unlikely to be beneficial [6].

This report describes a child with unique features of BACM that include persistence of symptoms beyond a week, recurrent episodes per a year, and concurrent similar case in the family, as well as the presence of multiple cofactors, which resulted in a diagnostic dilemma at the time of initial diagnosis.

Case Report

A 4 year old boy with a history of recurrent tonsillitis and who had febrile seizures two years ago presented during winter with fever (38.9ºC), headache, sore throat, rhinorrhoea, coryza, and non-productive cough of four days duration. He was diagnosed with acute tonsillitis, and received two doses of Augmentin. Two days later he presented again with non- projectile vomiting and bilateral calf and thigh pain with inability to bear weight.

According to his mother, he had similar episodes of lower limbs pain and weakness preceded by URTI and tonsillitis previously two years ago. All episodes resolve within 3-4 days, and in-between he had full activities like his pears. During one episode, his CK level was 2018 IU/L.

He had frequent tonsillitis 4-5 times/year and episodic body aches and pains. His 6 year old sister had a similar episode of 'post-viral myositis'. There was no family history of a hereditary neuromuscular disorder.

The examination was normal apart from fever, mild tachypnea, and tenderness on palpation of the calf muscles, difficulty walking, and congested, swollen tonsils with no exudate. Pain intensity was 8/10 for calf myalgia on Numeric Rating Scale (NRS).

Muscle weakness was mild in the legs (4+/5), according to the Medical Research Council (MRC) scale with normal deep tendon reflexes.

Laboratory tests revealed leukopenia (WBC 2.9) with Erythrocyte Sedimentation Rate (ESR) of 25, increased serum CPK of 430-12053 U/L (NR:42-186), normal phosphate of