Case study

Case report: Recurrent Calf Muscle Myositis in Pediatric Patient

Abstract

Focal myositis is a rare entity characterized by acute onset and localized skeletal muscle inflammation.

A four-year-old boy presented with recurrent muscle myositis. He had a high level of muscle enzymes.

Discharge after receiving fluid and analgesia.

Keywords: Recurrent, Muscle, Myositis.

Introduction

Heffner (1) described focal myositis as a rare entity characterized by acute onset and localized skeletal muscle inflammation of unknown origin. It's restricted to one muscle with a benign course without sequelae or recurrence (2).

This case report aims to describe a child affected with recurrent focal myositis. Furthermore, we reviewed the literature to summarize clinical, laboratory, management, and outcome data on recurrent focal myositis in childhood.

Ethical consideration from hospital was taken.

Case report:

First visit to ED:

A four-year-old boy presented to the emergency department (ED) with fever, cough, and runny nose for four days, one-day history of calf muscle pain, and an inability to walk. No headache, no vomiting, and no joint pain or swelling. He is medically free, but all families had upper respiratory tract infection symptoms.

On examination: normal vital signs, calf muscles were tender, hot, no calf muscle swelling, normal joint and skin examination, normal cardiovascular, chest, abdomen, and neurological examination.
Other systemic exams were normal.
Investigations: positive COVID-19 PCR Test, CK-Total was 11135 U/L[39-308 U/L], LDH 686 U/L[120-300 U/L], Aldolase 65.3 U/L[<7.7 U/L], normal CRP and ESR, normal urine for myoglobinuria, Normal Complete blood count, normal serum electrolytes and renal function, normal urinalysis and culture, PCR for MRSA not detected, and normal ECG.
Treatment: fluid for hydration, analgesia, and bed rest. After four days, he was discharged in good condition with normal CK-Total.

Second visit to ED:

After two months after the first attack patient presented to ED with fever, symptoms of the upper respiratory tract infection for two days, and an inability to walk with calf muscle pain for one day. No headache, vomiting, diarrhea, or joint pain.
Examination: normal vital signs, tender calf muscles, normal joints, and skin. Normal other physical examination.
Investigations: negative COVID-19 PCR Test, CK-Total was 1197 U/L [39-308 U/L], normal complete blood counts, normal serum electrolytes and renal function, normal urine analysis and culture, no myoglobinuria, normal CRP and ESR.
Treatment: good hydration with fluid and analgesia with bed rest.

Discussion

Muscle myositis is an episode of a muscle mass enlargement characterized by recurrent focal myositis over days to months(1.,3,4). Most published reports are single cases or case series involving adults in their studies (5). Then, relapsing episodes of focal myositis account for up to 18% of focal myositis cases. (2)
Focal myositis is a focal inflammatory pseudo tumor usually restricted to one skeletal muscle with a benign course, prognosis, and self-remission. The nature of recurrence seems to be related to the etiology of the illness (2, 6, 7, 8, 9). Viruses and infection were the leading causes of focal

myositis, but no specific organism was identified. Toti(10) tried PCR looking for EBV, herpes simplex virus types 1 and 2, and cytomegalovirus but had negative results.

Laboratory findings in patients with focal myositis showed both normal or slightly elevated inflammation indices (white blood count, CRP, ESR) and muscle enzymes (CPK, aldolase, and LDH)(11).

Lorenzo Schantz et al. reported 13 -year - old patient with recurrent high muscle enzymes with pain diagnosed with recurrent myositis treated with conservative management (12).

COVID-19-induced myositis that complicated with rhabdomyolysis are relatively rare [13, 14]. Up to July 2020, a single case of COVID-19-related myositis had been reported in adult in the literature [15]. Since then, many cases were reported mainly in adult. Most other virus-associated muscle inflammation result in muscle damage [13].

Conclusion

Although focal myositis is considered a self-limited disease, we believe a long-term clinical and biochemical follow-up is needed.

References

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