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Case Report

From restless leg to redness leg: a case of leg edema and erythema following pramipexole treatment

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Case

73-year-old male with Restless leg syndrome (RLS) presented to the hospital with worsening bilateral leg swelling and redness 1 week before admission. Both have been fluctuating for almost 1 year despite treatment with oral furosemide. The patient had no other complain, and the physical exam was only remarkable for bilateral non-tender leg redness and pitting edema with blisters. The workup was negative for proteinuria, hypothyroidism, liver disease and cellulitis. Furthermore, the patient had normal chest radiography, transthoracic echocardiogram and bilateral lower extremity Doppler ultrasonography. Therefore, the best explanation for the patient's presentation was being the side effect of Pramipexole that was prescribed for RLS almost 1.5 year before admission. The patient was tapered off Pramipexole and discharged on oral furosemide. Both the swelling and redness improved in the follow up visits, however given his RLS that needed treatment and given that he did not respond to gabapentin or pregabalin, patient was placed on Ropinirole which controlled his RLS. The patient continued to have some degree of edema that responded to compression treatment and elevation.

Discussion

Leg edema is a common, sometimes challenging problem with broad list of differential diagnosis. The underlying diagnosis list can be narrowed by duration (acute < 72 hours vs chronic), laterality (unilateral vs bilateral) and associated symptoms.[1,2] Below are some causes of chronic bilateral leg edema as they are more pertinent to our patient[2]:

Venous Insufficiency
Heart failure
Liver disease
Renal disease
Drug- Induced
Lymphedema

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Myxedema

Pramipexole is a dopamine agonist used in treatment of Parkinson disease (PD) and RLS and is commonly associated with nausea, somnolence, and visual hallucinations as side effects.[3-5] Prevalence of peripheral edema according to Tan E et al was 5-7 %[3] and the onset of edema can happen up to months after starting Pramipexole, as it was demonstrated in one study by ranging from 0 to 53.8 months[5]. Pathophysiology of peripheral edema is not well understood and limited data available about risk factors.[5] However, one study identified possible risk factors among Parkinson patients taking Pramipexole which include advanced age, Idiopathic PD, Coronary artery disease, and Diabetes.[5] Also mechanism is suggested by some to be dose related and by others as idiosyncratic.[3,5] Given the fact that leg edema has been also noticed with Bromocriptine and Ropinirole, so it might also be related to dopamine agonism.[5]

We present a case of patient who developed peripheral edema after starting Pramipexole. The patient was extensively investigated and it did not reveal other diagnosis. Besides, it was noticed that the symptoms did not respond to oral diuretics alone. Based on those data, the suspicion was raised about Pramipexole- induced edema and the noticed improvement of the edema upon discontinuing the medication supported that suspicion. On the other side, he continued to have some degree of edema, and this could be explained by the fact that the patient continued to take another dopamine agonist, Ropinirole, that is also known to cause peripheral edema with limited data on its prevalence.[5] Also it could be explained by some degree of underlying Lymphedema that was worsened by the medication and he needs to be evaluated by a Lymphedema specialist as well.

Our take-home message is to consider Pramipexole in the differential diagnosis of leg edema and redness in patients with RLS or PD as it can be easily missed being less common side effect and that mere discontinuation of the medication can help improve or even resolve the edema completely and sometimes this spares the patient further costly work up. Furthermore, leg edema can be very challenging symptom to know its cause, so it is important to keep mind open for different possibilities.

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Conflict of interest

None

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