

Post Terbinafine Adrenal Gland and Testis Dysfunction that Imitated Fibromyalgia: Case Report

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Received date: January 21, 2016, Accepted date: September 19, 2016, Published date: September 22, 2016

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Abstract

We present the case of a 35 year old patient who suffered from the chronic widespread pain that mimicked fibromyalgia or myopathy, and turned out to be an acquired endocrinological disorder. The Patient was previously treated for fungal skin infection and had been taking terbinafine for 3 months and developed testis and adrenal gland insufficiency.

Introduction

We present the case of a 35 year old patient who suffered from the chronic widespread pain that mimicked fibromyalgia or myopathy.

Case Report

A Patient aged 35, was admitted to our Neurology Department in order to diagnosed diffuse muscle pain that he suffered from 2 months. He felt constantly tired to a degree that his normal activities were affected. Other symptoms included joint stiffness, sleep disturbance, paraesthesias, bilateral sciatic nerve and femoral nerve pain. For that reason he had been taking a lot of painkillers as well as antidepressant with analgesic component like venlafaxine but without any relief.

His medical history was meaningless, except for the fact that for the last three months he had been taking Terbinafine in order to treat skin lesion that was diagnosed to be a fungal infection.

The results of basic laboratory tests, including blood morphology, CRP level, glucose, CK, urinalysis, chest X-ray examination, liver and kidney function tests, were normal. Standard neurological examination and MRI scan of the head was performed as well as lumbar no changes were found.

Myopathy, myasthenia and sclerosis multiple were excluded and diagnosis of fibromyalgia was proposed. Unfortunately, the patient started to complain about the low blood pressure, symptoms like orthostatic hypotension, dizziness and syncope. His blood pressure lowered to 80/50.

The only result that was above the norm was electrolytic level abnormality in blood serum, which regarded higher potassium- about 6 and lower sodium level: 125. What is more his skin became darker. Hyperpigmentation was especially well spotted on patient's palms. These findings induced us to check his adrenal gland hormonal function. Hormones like cortisol were below the norm and ACTH level was very high. Pituitary function was also checked and the excreted hormones- TSH, LH, PRL fitted in the normal range.

What drew our attention to terbinafine, was the fact that one of side effects described in the literature is antianrogenic and antiglucocorticoid effects. To corroborate our diagnosis testosterone

level was additionally measured and the results was outside the norm. Once the diagnosis of adrenal gland and testis insufficiency was ascertained, hydrocortisone in dosage of 200mg per day was administered. After three days of therapy muscle pain relived and patient's blood pressure, as well as sodium and potassium level in serum, came back to normal.

Discussion

Fibromyalgia is medical condition characterised by chronic widespread pain with a painful response to pressure [1]. Terbinafine blocks the synthesis of the ergosterol and potently inhibits the activity of several enzymes necessary for the conversion of cholesterol to steroid hormones, such as testosterone and cortisol [2-4].

Testosterone induces skeletal muscle hypertrophy by multiple mechanisms, including its effects in modulating the commitment of pluripotent mesenchymal cells. These changes in skeletal muscle lead to improved muscle strength and leg power [5].

Corticoids sustained organism homeostasis and influence many metabolic functions. They are produced in adrenal cortex and released in response to stress and low sugar concentration in blood. Their primary functions in muscle are to increase protein breakdown, inhibit glucose uptake and increase lipolysis (the breakdown of fats). Apart from that mineralocorticoids regulate normal sodium and potassium levels [6].

While ketoconazole is well known as antiandrogenic and antiglucocorticoid agent adrenal insufficiency after Terbinafine treatment is reported very rarely. In one of the studies of people who have suffered from side effects while taking terbinafine, from 6901 examined patient, only 3 have had adrenal insufficiency [7]. Our Patient had suffered from chronic pain and fatigue that affected his daily life, making him unable to work. Our case shows that oral Terbinafine treatment should be considered and administered only when it is absolutely indispensable.

Conclusion

Hormones like androgens and glucocorticoids have an enormous influence on muscle and nerves function and should always be taken

into consideration when neuromuscular symptoms that are uncommon or difficult to bring under control appear. Terbinafine is rarely associated with antiandrogenic and antiglucoconitoid side effects therefore our case is noteworthy.

References

1. Ngian GS, Guymer EK, Littlejohn GO (2011) "The use of opioids in fibromyalgia". *Int J Rheum Dis* 14: 6–11.
2. Finkel R, Cubeddu LX, Clark MA (2009) *Pharmacology* (4th edn). Lippincott Williams & Wilkins, Baltimore.
3. Kauffman CA (2004) "Introduction to the Mycoses" (22nd edn). In Goldman L, Ausiello, D. *Cecil Textbook of Medicine*, Philadelphia.
4. Becker KL (2001) *Principles and Practice of Endocrinology and Metabolism* (3rd edn). Lippincott Williams & Wilkins, USA.
5. Herbst KL, Bhasin S (2004) Testosterone action on skeletal muscle. *Curr Opin Clin Nutr Metab Care* 7: 271-277.
6. Coderre L, Srivastava AK, Chiasson JL (1991) "Role of glucocorticoid in the regulation of glycogen metabolism in skeletal muscle". *Am J Physiol* 260: E927–932.
7. www.ehealthme.com/ds/lamisil/adrenal+insufficiency