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A Case Report on Tibolone Induced Hirsutism

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Abstract

Hyperandrogenic effects are induced by many drugs and one of the major concerns are hirsutism. There exist no age patter for this particular condition. A 57-year-old lady was presented with hirsutism which was expected to be induced by the use of Tibolone.

Keywords: NIL

INTRODUCTION

Many drugs can induce hyperandrogenism Hirsutism is one among the hyperandrogenic effects which is commonly seen in female patients of all ages and has a huge psychological impact Hirsutism means the growth of excessive male-pattern hair in women after puberty. It affects facial and body areas dependent on androgens, namely mustache and beard, pubic hair, buttocks, and thighs.It affects around 5-10% of women which requires indepth clinical evaluation and investigation for treatment(1,2)

CASE REPORT

A 57-year-old lady, homemaker, married and has two children presented for the evaluation of Hirsutism. She was admitted in a medical college hospital for reddish coloured patches over the distal part of the extremities and diagnosed to have Allergic dermatitis. Routine investigations were normal. In view of generalized weakness, hirsutism and obesity, serum cortisol, TSH, FT4 were sent which revealed low cortisol (8 am: 14 ng/ml), normal FT4 (17 pmol/l) with normal TSH value. In view of hirsutism, she was referred to the department of Endocrinology of our hospital.

Her physical examination profile showed hair growth over the upper lips, no thyromegaly, no abdominal striae, BP-120/90mmHg, heart rate -85bpm and moon face (+) . She is a known case of Hypertension for 11 years and Dyslipidemia for 8 years. She undergone hysterectomy in 2015 and now was suffering from post-menopausal symptoms. At the time of referral, the patient was on TAB. ROZAVEL 10 MG OD, TAB. CONCOR 2.5 MG OD, TAB.TELMA 40 MG OD, TAB.EBAST 10 MG OD, TAB.RANTAC 150 MG OD, FUCIBET CREAM

L/A, T. TIBOLONE 2.5 MG. The possibility on drug induced hirsutism was considered. Among the drugs she took, T.Tibolone, which is a synthetic steroid having estrogenic , androgenic and progestogenic properties can induce hirsutism. So she was advised to stop the particular drug.

DISCUSSION

Tibolone is a synthetic steroid with weak estrogenic, progestogenic, and androgenic activity, and hence is an agonist of the estrogen, progesterone, and androgen receptors

It is used for the treating oestrogen deficiency symptoms in postmenopausal women for more than one year after menopause and prevention of osteoporosis in postmenopausal women who are at

high risk of future fractures or contraindicated to other medications which are used for the prevention of osteoporosis (6)

Tibolone, being a synthetic steroid can cause androgen excess. The mechanisms of androgen excess are various:

(1) intrinsic androgenic activity Tibolone

(2) interaction with sex hormone-binding globulin

(3) Hypothalamic–pituitary–ovary axis's functional alterations. But, the physiology of these drugs remains generally unclear

Intrinsic androgenic activity Tibolone

As Tibolone being a synthetic derivative of testosterone, it induces Intrinsic Androgenic Activity. As such, they bind to the androgen receptor and exert direct androgenic action. Because the androgen receptor mediates both the anabolic and androgenic actions, no anabolic steroid is devoid of androgenic properties.

Interaction with sex hormone-binding globulin

Tibolone decrease sex hormone-binding globulin (SHBG) plasma concentration, and thereby increase free testosterone level, by suppressing the hepatic synthesis of hormones in a dose dependent manner. They may also bind to SHBG, displacing testosterone and increasing the plasma level of free active testosterone. Therefore, an increased concentration of free testosterone explains, the high prevalence of hirsutism in women taking these drugs.

Hypothalamic–pituitary–ovary axis's functional alterations.

Some investigators have suggested that Tibolone may interfere with the hypothalamic control of the hypothalamic–pituitary–ovarian (HPO) axis by altering luteinizing hormone secretion through mechanisms involving J-aminobutyric acid-ergic neurotransmission. (5,7)

CONCLUSION

Tibolone is one among the synthetic steroids that can induce hirsutism. If such an ADR is identified, the progress of this particular condition could be arrested by discontinuing the drug. Whenever Tibolone is prescribed, the chances of androgen excess should be expected and timely management could definitely revert it.

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