Acquired Male Hypogonadotropic Hypogonadism (MHH) in a type 2 Diabetes patient revealing Empty Sella

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INTRODUCTION

Empty sella in male patients is a very rare situation. It could be diagnosis in acquired male hypogonadotropic hypogonadism or hypopituitarism. In type 2 diabetes, the erectile dysfunction (ED) is a common situation. Male Hypogonadotropic hypogonadism (MHH) is an endocrine disorder that could lead to ED.

CASE REPORT

A 55 year-old type 2 diabetes male was referred to our hospital with erectile dysfunction (ED). He has 3 children. His secondary sex characteristics, sexual function and ejaculation were previously normal but for the last 3 years he had ED. His genital stage was Tanner V, and pubic hair stage was Tanner III.

There were no varicoceles. The diabetes was poorly controlled (Hb1Ac = 9%).

His hormonal data were luteinizing hormone (LH) 1.1 mIU/ml (normal: 2-8 mIU/ml), follicle stimulating hormone (FSH) 1.8 mIU/ml (2-12 mIU/ml), testosterone 1.2 ng/ml (3-7 ng/ml), FT4 : 13 pmol/l (10-20 pmol/l).

The rate of PSA was normal. Magnetic resonance imaging of the head revealed slight depression of the diaphragma sellae, indicating an "empty sella" [Fig 1-2-3].

We diagnosed acquired hypogonadotropic-hypogonadism related empty sella.

A replacement androgen therapy was introduced. Twelve months after hormone replacement therapy, the ED wasn’t disappear but the quality of life of this patient was better.

DISCUSSION

- Hypogonadotropic hypogonadism in men is not an uncommon disease and can usually be classified into two categories representing congenital and acquired forms. The incidence of congenital IHH is about 0.025%.

- Acquired hypogonadotropic hypogonadism can be caused by various clinical conditions: pituitary adenomas, brain tumours, inflammatory diseases and traumas may directly disturb the hypothalamus and pituitary gland functions [1].

- Erectile dysfunction is common in type 2 diabetes men poorly controlled. It may reveal endocrine dysfunction such as acquired functional MHH.

- Pituitary MRI is frequently normal. In our case, it reveal empty sella. Micro-vascular mechanism related to type 2 diabetes was incriminated.

CONCLUSION

- Adult-onset MHH patients may present symptoms of ED and gynaeconastia with isolated deficits in the hypothalamus–pituitary–testis axis. Although the underlying mechanisms are not clear, they might involve autoimmune antibodies specifically targeted to GnRH neurons or gonadotrophs. Gonadotropins should be considered as a clinically significant alternative therapy because spermatogenesis can be restored in most patients with adult-onset hypopituitarism.

- In this observation, we report a common situation in type 2 diabetes patient which revealed a rare case of acquired MHH due to empty sella. Pituitary MRI is interesting in acquired MHH and can reveal multiples other endocrine deficiency.

References :