

Case Report

A case of pituitary adenoma presenting with normal hormone levels

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ABSTRACT

We report a case of pituitary adenoma with normal hormone levels in a 34-year-old female. She presented to OP with headache, milky discharge from nipples and secondary amenorrhea with transient loss of vision. Patient had hyperprolactinemia with normal levels of all other pituitary hormones. MRI revealed space occupying lesion in sellar and suprasellar region. Neurological consultation suggested Rathke's cyst/ craniopharyngioma/ macroadenoma. Excised lesion was diagnosed as pituitary adenoma during histopathological analysis.

Keywords: Pituitary adenoma, Pituitary stalk tumor, Hyperprolactinemia

INTRODUCTION

In 1990, Endheim described the first case of ectopic pituitary adenoma.¹ Pituitary adenoma is the most common lesion found in the sellar space.² The most common site of ectopic adenoma is seen in supra sellar space. Till 2007, there are around 80 cases of pituitary adenoma reported in literature among them 30 are ectopic pituitary adenomas in suprasellar space. In our case the space occupying lesion was found in both sellar and supra sellar region. Generally, patients with pituitary adenoma will have specific hormone imbalance and also pressure symptoms such as headache, visual disturbances or stalk effect.³ However our case was unique in presentation with clinical symptoms but was negative for all the elevated hormones levels. So herewith we report a case of pituitary adenoma with normal hormone levels in 34-year-old female.

CASE REPORT

A 34-year-old female with no known co-morbidities presented to medicine OPD with complaints of headache (holocranial) since 6 months, milky discharge from nipples since 5 months, amenorrhea since 10 months, and transient loss of vision since 3 days. Patient didn't have history of

fever, cough, chest pain and breathlessness. Cardiovascular, respiratory and per abdominal examinations were found to be normal. Patient had bitemporal hemianopia and presence of galactorrhea.

Lab investigations revealed normal haemoglobin level (13 gm/dl), total leucocyte count (6570cells/cu.mm) and platelets count (3.2 lakhs/cu.mm). Urea, creatinine and liver function tests were normal. USG abdomen revealed polycystic kidneys. Fasting blood sugar and post prandial blood sugar was found to be normal (94 mg/dl and 109 mg/dl respectively). Prolactin level was highly elevated which was 83.4 ng/ml (Normal range in non-pregnant females: <25 ng/ml). T3 and T4 was found to be normal and TSH was very much decreased which was <0.015. All other pituitary hormones such as growth hormone, luteinizing hormone (LH), follicle stimulating hormone (FSH) and cortisol were found to be within the normal limit.

MRI brain revealed solitary nonfat suppressing T1 and T2 hyperintense space occupying lesion in the sellar and suprasellar region with internal heterogenous signals in the posterior aspect-images suggestive of Rathke's cyst cyst or craniopharyngioma or macroadenoma. Neurosurgery consultation was got and patient underwent trans-nasal transsphenoidal excision of space occupying lesion after

which her symptoms settled completely. The histopathological analysis of the biopsy taken from the lesion showed it was a pituitary adenoma. Patient is under follow up and has currently no complaints.

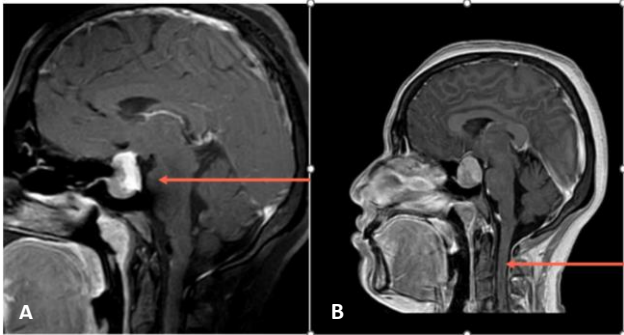


Figure 1 (A and B): Space occupying lesion in the sellar and suprasellar space.

DISCUSSION

Pituitary adenomas are typically benign, slow-growing tumors that arise from cells in the pituitary gland. About 70% of adenomas are endocrine-active tumors which cause hormonal imbalance. Around 14-54% is non-functioning pituitary adenomas (NFPAs) are benign pituitary neoplasms that do not cause a hormonal hypersecretory syndrome. The incidence rate is 0.65-2.34/100,000 and the peak occurrence is from the fourth to the eighth decade.⁴ The clinical spectrum of NFPAs varies from being completely asymptomatic to causing significant hypothalamic/pituitary dysfunction and visual field compromise due to their large size. Most patients present with symptoms of mass effect, such as headaches, visual field defects, ophthalmoplegias, and hypopituitarism but also hyperprolactinemia due to pituitary stalk deviation.⁵

Our patient had headache, transient loss of vision with hyperprolactinemia. The analysis of other hormone levels revealed normal results. Most patients with large pituitary tumors do not exhibit hyperprolactinemia. Secondary hyperprolactinemia was found in 14% of patients irrespective of the adenoma volume.⁶ Our patient had highly elevated prolactin level of 83.4 ng/ml and milky discharge from the nipples for the past 5 months. This secondary hyperprolactinemia is due to the mass effect of the tumor upon the pituitary stalk, obstructing the normal inhibitory hypothalamic influence on the prolactin producing cells (stalk effect).⁷ MRI examination was done based on the clinical symptoms and it revealed a space occupying lesion in the sellar and supra sellar region in our patient. Pituitary adenoma was confirmed using histopathological analysis of biopsy after a variety of differential diagnosis.

Transsphenoidal surgery for non-functioning pituitary adenoma might lead to higher total resection rates around 85%.⁸ Transsphenoidal surgery has a low morbidity and

mortality; it is nevertheless associated with potentially serious difficulties.⁹ So our patient underwent trans-nasal, transsphenoidal excision of space occupying lesion after which her symptoms settled completely. Patient is under follow up now and has currently no complaints.

CONCLUSION

Timely and accurate diagnosis of pituitary adenomas must be done. Women with hyperprolactinemia typically seek medical consultation because of the classic amenorrhoeagalactorrhoea syndrome associated with the condition. Bone loss and vertebral fractures are the most common comorbidities of hyperprolactinemia. Delayed diagnosis will increase the severity of complications, delayed intervention, a reduced quality of life for patients, and an increased risk of mortality. Typical physical features are slow to manifest so diagnosis may be missed or delayed. So, care should be taken in not missing out any of the clinical symptoms related to adenoma and appropriate diagnostic measures should be done to rule out the diagnosis.

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Ethical approval: Not required

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