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Pituitary Adenoma Revealed by Optic Neuropathy: a Case Report and Literature Review

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Abstract **Case Report**

Pituitary adenoma, also known as pituitary adenoma, is a type of benign tumor of the pituitary gland, which is a gland located in the brain and which is responsible for controlling the production of hormones such as cortisol, prolactin, growth hormone and hormones that stimulate functioning of the ovaries and testes. This type of tumor is rare and, as it is benign, it is not life threatening, however it can cause symptoms that decrease quality of life such as infertility, decreased libido, milk production or neurological and ophthalmological symptoms such as headache or partial loss of vision. This is a 25-year-old student, with a pathological history of amenorrhea-galactorrhea syndrome. After about 5 years with amenorrhea and galactorrhea, she mentioned that she had consulted with general practitioners and gynecologists several times in her country of origin but they were unable to discover the cause for lack of diagnostic means, after 6 months of her arrival in the kingdom of Morocco, presented in our ophthalmology service of HMIMV-Rabat, at the ophthalmological examination, uncorrected visual acuity 2/10 in the right eye and 1/10 in the left eye, visual acuity with correction 4/10 in the right eye and 3/10 in the left eye with visual field loss, Fundus examination of the right and left eye showed pale papilla with pathological cupping. Papillary OCT vertical diameter with pathological cupping at 0.84 in the left eye and limit at 0.61 in the right eye (f-1); visual field revealed amputation in right and left eye and orbitocerebral MRI was favorable to pituitary macroadenoma with diameter of (18x15x15 mm), compresses optic chiasm, complementary exams: Elevated prolactin of: 23 135.00 µUI/ml, thyroid hormone dosage: T3, T4 and TSH are all normal. Finally, we requested consultation with an endocrinologist and a neurosurgeon, and the patient was transferred to the neurosurgery service for a better study and possible surgery.

Keywords: Amenorrhea, galactorrhea, low visual acuity, visual field amputation, such as microprolactinoma.

INTRODUCTION

Pituitary adenoma, also known as pituitary adenoma, is a type of benign tumor of the pituitary gland, which is a gland located in the brain and which is responsible for controlling the production of hormones such as cortisol, prolactin, growth hormone and hormones that stimulate functioning, of the ovaries and testes. This type of tumor is rare and, as it is benign, it is not life-threatening, however it can cause symptoms that decrease quality of life such as infertility, decreased libido, milk production or neurological and ophthalmological symptoms such as headache or partial loss of vision. Whenever symptoms appear that may indicate a pituitary adenoma, it is important to consult an endocrinologist, neurologist and ophthalmologist to carry out diagnostic tests, identify the problem and initiate the most appropriate treatment. Clinically, pituitary adenomas are the most common macroadenomas in adults [1]. They are characterized by being accompanied by detectable hormonal hypersecretion in plasma and are clinically expressed by the mass effect of the tumor. Headache occurs in more than 40% of patients and is due to increased intracranial pressure or dural distention. In most patients, there is also hypopituitarism due to compression of the healthy pituitary gland, which can produce psychiatric symptoms due to hormonal changes [2].

CASE REPORT

This is a 25-year-old student, with a pathological history of amenorrhea-galactorrhea syndrome. After about 5 years with amenorrhea and galactorrhea, she mentioned that she had consulted with

general practitioners and gynecologists several times in her country of origin but they were unable to discover the cause for lack of diagnostic means, after 6 months of her arrival in the kingdom of Morocco, presented in our ophthalmology service of HMIMV-Rabat, according to her, more than a year ago she realized that she has a progressive loss of visual acuity with a decrease in the visual field. On ophthalmologic examination, uncorrected visual acuity 2/10 in the right eye and 1/10 in the left eye, visual acuity with correction 4/10 in the right eye and 3/10 in the left eye with loss of visual field, cleft, attachments and anterior segment without change, intraocular pressure of 14 mmHg in the right eye and 14 mmHg in the left eye. Fundus examination of the right and left eyes showed a pale papilla with pathological cupping. Papillary OCT vertical diameter with pathological cupping at 0.84 in the left eye and limit at 0.61 in the right eye (f-1); visual field revealed amputation in right and left eye and orbitocerebral MRI was favorable to pituitary macroadenoma with diameter of (18x15x15 mm), compresses optic chiasm, complementary exams: Elevated prolactin of: 23 135.00 µUI/ml, thyroid hormone dosage: T3, T4 and TSH are all normal. Finally, we requested consultation with an endocrinologist and a neurosurgeon, and the patient was transferred to the neurosurgery service for a better study and possible surgery.

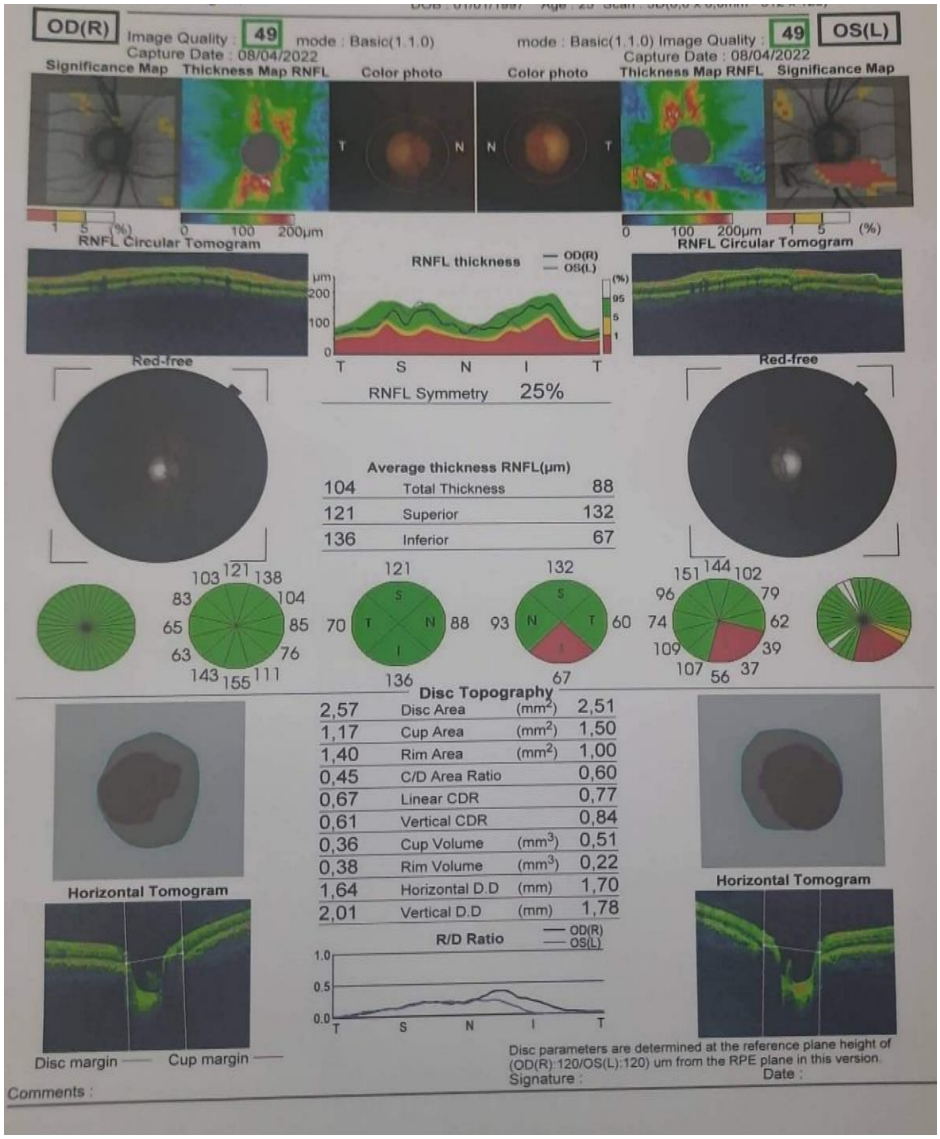

Figure 1: Papillary OCT

1. Double collision spectrum respected in the right eye, not respected in the left eye with RNFL in symmetrical 25%
2. Total thickness of the optical fiber at 104 µm in the right eye and 88 µm in the left eye
3. C/D at 0.45 in the right eye and 0.50 in the left eye
4. Vertical diameter with pathological cupping at 0.84 in the left eye and limit at 0.61 in the right eye.

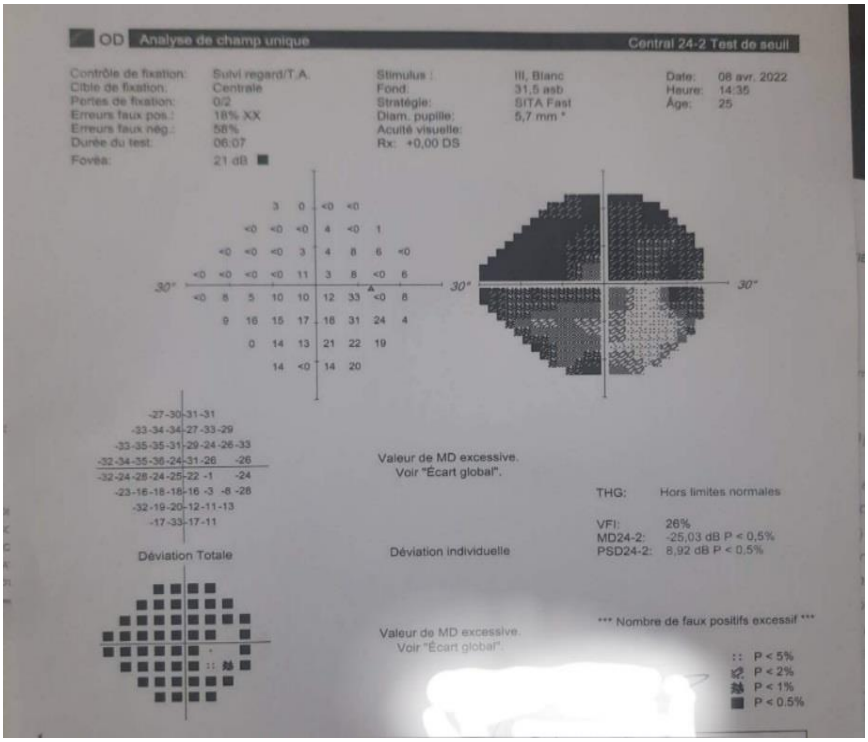

Figure 2: Visual field of the right eye

1. Predominant absolute relative hyposensitivity in the upper altitudinal hemifield
2. Lack of macular preservation
3. Only one inferior nasal island is spared
4. Single low foveolar

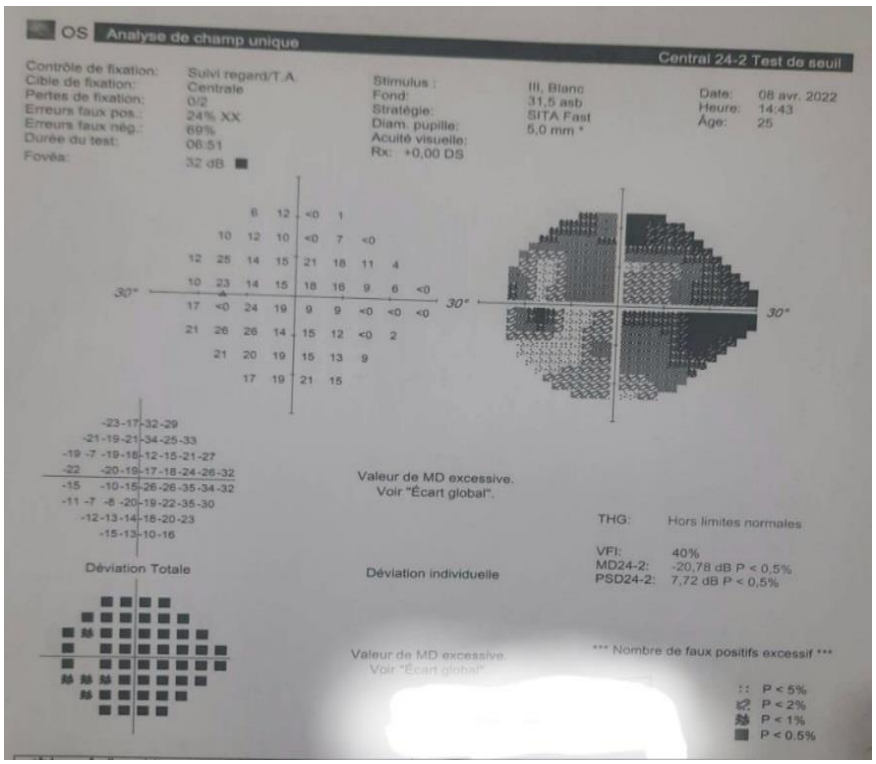

Figure 2: Visual field of the left eye

1. Nose jump
2. Hyposensitivity, relative to absolute with slight enlargement of the lower blind spot
3. Decreased single foveolar

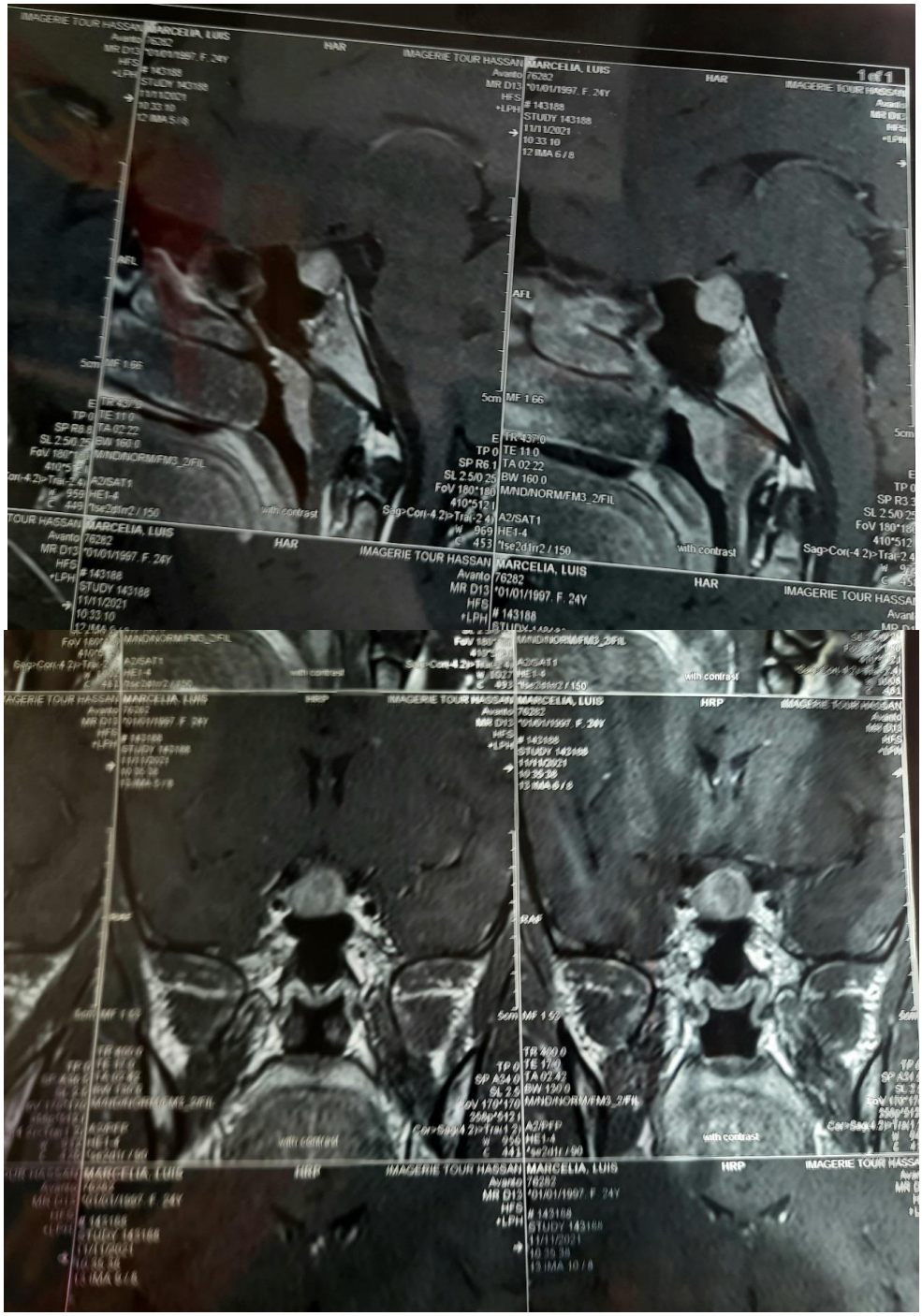

Figure 3: Orbitocerebral Magnetic Resonance Imaging (MRI) favorable to pituitary adenoma with a diameter of (18x15x15 mm)

DISCUSSION

The pituitary adenoma is a prolactin-secreting tumor and is classified according to its size as microprolactinoma (less than 10 mm in diameter) or macroprolactinoma (greater than 10 mm in diameter), in the observed case it would be a macroprolactinoma. It can be diagnosed in women as well as men, predominantly in females. Clinically, galactorrhea and amenorrhea are more common symptoms in women and in men galactorrhea, sexual dysfunction and infertility are more common symptoms.

From an epidemiological point of view, in recent decades an increase in the prevalence of these lesions has been observed, due to the ease provided by imaging tests, especially Magnetic Resonance Imaging (MRI) and the consequent diagnosis of lesions in the subclinical phase. Given that all ophthalmic patients with low visual acuity with visual field amputation, papillary pallor, are the patients who need brain imaging exams such as Magnetic Resonance Imaging (MRI) or Brain Scanner in order to eliminate intracranial tumors, which has led to debates. between ophthalmologists and neurologists about whether all

patients with these progressive onset ophthalmic signs and symptoms should undergo neuroimaging exams, which is why we chose to request MRI, finding a tumor mass compatible with pituitary macroadenoma located at the sellar-suprasellar level.

Depending on the type of adenoma, clinical or surgical treatment can be chosen.

Clinical treatment of pituitary adenoma is performed with medication and hormone dosage is measured, in addition to control with imaging tests.

Surgical treatment of pituitary adenoma is performed in the absence of clinical treatment or in the presence of lesions larger than 1 cm in diameter, in which there is a risk to the patient's vision and decompression is urgently required.

To treat functioning adenomas, the use of drugs that interrupt the production of hormones is indicated. In more aggressive or refractory cases, in which the adenoma has returned to act, radiotherapy can be used, but this treatment can cause long-term side effects, being therefore recommended only as a last resort.

CONCLUSION

Pituitary adenoma is a very rare prolactin-secreting tumor and is classified according to its size as microprolactinoma (less than 10 mm in diameter) or macroprolactinoma (greater than 10 mm in diameter). due to its slow growth, with late and diversified clinical manifestation. The laboratory tests used in the measurement of pituitary hormones together with the patient's clinical and imaging tests, complementing with high sensitivity the clinical laboratory findings of patients with adenoma. This is due to the excellent resolution and contrast that MRI images exhibit. Therefore, MRI of the sella turcica has been the most indicated exam for the diagnosis of this pathology. Present major therapeutic problems.

REFERENCIAS

1. Saeger, W., Lüdecke, D. K., Buchfelder, M., Fahlbusch, R., Quabbe, H. J., & Petersenn, S. (2007). Pathohistological classification of pituitary tumors: 10 years of experience with the German Pituitary Tumor Registry. *European journal of endocrinology*, *156*(2), 203-216. 10.1530/eje.1.02326 17287410
2. Kreitschmann-Andermahr, I., Siegel, S., Weber Carneiro, R., Maubach, J. M., Harbeck, B., & Brabant, G. (2013). Headache and pituitary disease: a systematic review. *Clinical endocrinology*, *79*(6), 760-769. 10.1111/cen.12314 23941570
3. Levy, M. J. (2011). The association of pituitary tumors and headache. *Current neurology and neuroscience reports*, *11*(2), 164-170. 10.1007/s11910-010-0166-7 21128024
4. Briet, C., Salenave, S., Bonneville, J. F., Laws, E. R., & Chanson, P. (2015). Pituitary apoplexy. *Endocrine reviews*, *36*(6), 622-645. 10.1210/er.2015-1042 26414232
5. Arafah, B. U. M. (1986). Reversible hypopituitarism in patients with large nonfunctioning pituitary adenomas. *The Journal of Clinical Endocrinology & Metabolism*, *62*(6), 1173-1179. 10.1210/jcem-62-6-1173 3009521
6. Cámara, R. (2014). Tumores hipofisarios no funcionantes. *Endocrinol Nutr*, 61(3), 160-170.
7. Sanchez, R., & Way, S. (2012). Adenoma hipofisiario y depresión. *Journal of Neurosychopharmacology*, 6, 18-27.
8. Valera Bestard, B., Dorado, S., Piedrola Maroto, G., & Tenorio, H. (2003, April). Manifestaciones psiquiátricas secundarias a las principales enfermedades endocrinológicas. In *Anales de medicina Interna* (Vol. 20, No. 4, pp. 50-56). Arán Ediciones, SL.
9. León Blasco, A., Galindo Portuondo, E., & Rivacoba Martínez, A. (2014). Adenoma de hipófisis como forma infrecuente de insuficiencia suprarrenal secundaria. Presentación de un caso. *Medisur*, *12*(1), 118-124.
10. Rojas, D., Palma, A., & Wohllk, N. (2008). Manejo de los adenomas hipofisiarios. *Revista chilena de neuro-psiquiatría*, *46*(2), 140-147.
11. Furgal, A., Lis, G., & Litwin, J. A. (2015). Aumento de la incidencia de los microadenomas hipofisiarios en víctimas de suicidio. *An Med Interna*.