

Clinical-Imagistic Correlations in the Prolactinomas Evolution

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ABSTRACT Pituitary pathology of prolactinoma type was studied under the clinic and imagistic aspect. In the present, clinic and paraclinic diagnosis colligation to the imagistic one, may constitute the base for a prolactin secreting macro-or microadenoma correct diagnosis. Evolutivity aspects of those post therapeutic lesions are different meaning the rapid favorable evolution of the serous prolactine values, of a slower sometimes insignificant evolution of imagistic quantified lesions. Clinical, paraclinical but also imagistic monitoring of that pathology leads to optimizing the drug therapy applying.

KEY WORDS *pituitary, prolactinoma, imagistic monitoring*

Introduction

Pituitary prolactin secreting adenomas represents about 40-50% of all pituitary type adenoma lesions. They appear predominantly in women, especially among the second and third period of life, the rate between the two genders being of 10:1. After the fifth decade of life, prolactinomas frequency is comparable in both the genders (1,2,4,7). Prolactinomas varies in size, women usually presenting microadenomas whereas, in men, the diagnosis is usually macroadenomas.

In women, hyperprolactinemy determines oligomenorrhea or amenorrhea joined by galactorrhea.

In men, the predominant symptoms were impotency and diminishing libido, which can be sometimes usigned to other causes.

Besides those clinical manifestations caused by hormonal hypersecretions, it can be also added signs and symptoms secondary to the mechanic effect of those tumors such as: cephalaea and sight disorders (3,4,6). Those latter can be found only in patients with macroadenomas.

Finding pituitary adenomas by imagistic methods can complete the initial diagnosis of the disease and, as a consequence, the subsequent evolution of adenomas can be quantified by means of computer tomography or/and magnetic resonance (1,5,6).

Material and methods

The present paper had available a number of 20 patients, 13 of which females and 7 males, having been diagnosed with hyperprolactinemia; PRL values were over 100ng/ml when initial pretherapeutic examined.

Abnormal prolactin secretion evolution was followed by means of the values indicated by the specific tests.

Imagistically, prolactin secreting adenomas evolutivity was followed by means of a computer tomography and/or magnetic resonance at certain pre-established periods of time.

Pituitary gland specific examination protocols, both CT and MR, constantly in native acquisitions and post contrast with fine cups of 1-3 mm, were applied.

Patients studied by us were given drug therapy consisting of DOPA-amines agonists such as: bromocryptine, pergolide, carbegoline.

Results and discussions

15 from the total number of patients presented microadenomas when CT and/or MR examined and, in rest of them, macroadenomas constituted the pituitary lesions.

Three month after the drug therapy had been started, in 9 patients with microadenomas we could establish the following: prolactin serous concentration became normal and the tumor size

decreased. The rest of the patients with micro- and macroadenomas did not present a significant decrease of their adenomas size; in three of them, according to the laboratory tests, hyperprolactinemia and symptomatology persistence were established which can be due to the patients' increased tolerance to the medicine doses recommended.

Going on the medicine therapy and performing an imagistic reevaluation 6 months since the treatment initiation, all those revealed the next aspects, such as:

- images comparable to the subsequent exams in the 9 patients presenting the decrease of the adenoma size; clinical manifestations were not present any more and the serum prolactin level was normally maintained;
- decreasing adenomas size were established in another 5 patients with microadenomas and in only one patient with macroadenoma
- clinical manifestations were present in the rest of the patients with macroadenoma but decrease of prolactinemia values could be established.

The treatment standing with dopamine agonists, according to the specific chart may be of 5-6 years long.

At 1 year after drug therapy had started, within the imagistic evaluation, any unfavorable evolution could be established such as: the increase of the tumor size in all the patients which had subsequently presented normal prolactin values joined by the decrease of the tumoral process size.

In a number of 7 patients initially diagnosed with microadenoma we could observe the complete disappearance of the tumoral process, imagistically speaking and the maintaining of the prolactin values between normal limits (figure 1).

Size decrease, in the cases of microadenomas, after 1 year since the first imagistic exam, we could observe in only two patients and it was not a significant one.

Persistence of symptoms secondary toward the mass effect produced by the tumoral process on the anatomical structures of proximity led to change therapy into a surgical one.

From the analyses of those data one can appreciate that the favorable evolution of adenomas secreting prolactin under drug therapy is significantly correlated to the reduction or disappearance of the clinical specific manifestations since the beginning of the drug treatment. Therefore reduction of the tumoral

process sizes is not significantly correlated to the reduction or normalization of the serum prolactin values, neither in microadenomas or macroadenomas cases.

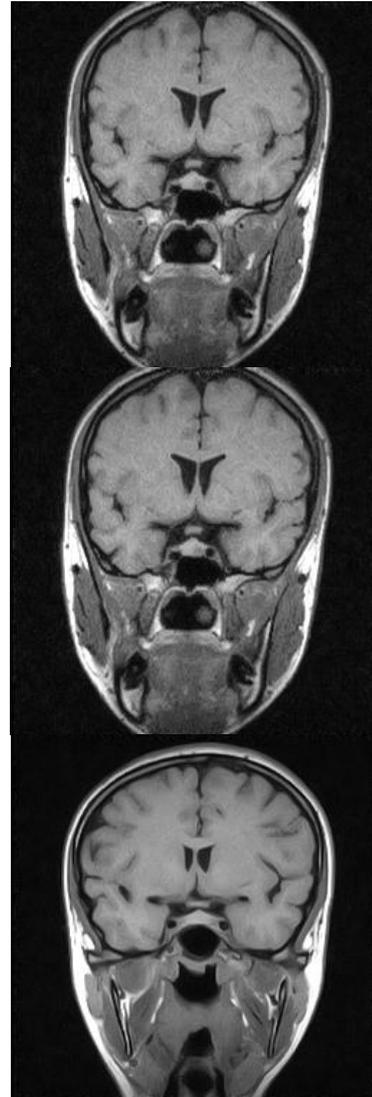


Figure 1 Coronal T1-weighted images. Evolution of microprolactinoma, before and after drug therapy, during 1 year

Imagistic monitorization presents a special importance in following micro- and macroadenomas; persistence, along the time, of the quasicontant imagistic aspect of the pituitary adenoma, in the context of both the clinic and paraclinic picture normalization, all those lead, in any case, to drug therapy prolongation.

It is also remarkable that the most efficient administered dopamine agonist was cabergoline; patients who underwent that therapy then presented a significant reduction of adenomas size.

Conclusions

Therapy with dopamine agonists applied to patients with prolactin hypersecretion has as a rapid effect the serous prolactin level normalization, reduction or disappearance of the specific clinical symptoms and a much alower evolution, namely the reduction of the adenoma sizes, imagistically established.

There is not any significant correlations between the favorable evolution of the pituitary adenomas, clinically, paraclinically and imagistically speaking

Imagistic monitoring is to be chosen in following prolactin secreting pituitary macro-and microadenomas.

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