# BROMOERGOCRIPTIN THERAPY IN EUMENORRHOIC PATIENTS PRESENTING GALACTORRHEA

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SUMMARY

Eleven eumenorrhoic patients presenting galactorrhea were subjected to a three-month Bromoergocryptin therapy (2.5 mg/os/die). Prolactin Circadian Rhythm, performed on all patients, showed four hyper and seven normoprolactinemic cases.

The mammary condition was studied, before and after treatment, through clinical examination, mammary cytology and thermography.

Hyperprolactinemic patients responded positively to the therapy, showing subjective, clinical and thermographic improvement.

Conversely, normoprolactinemic patients, though showing a noteworthy improvement of symptomatology and galactorrhea, did not respond equally well from the objective and thermographic points of view.

## INTRODUCTION

Hyperprolactinemia is not always matched by galactorrhea ([1, 2, 3]), and galactorrhea is not always a symptom of hyperprolactinemia ([4, 5, 6]). An amenorrhoic patient affected by galactorrhea is very likely to present hyperprolactinemia too ([7, 8, 9, 10]). But how often does this happen when the patient is eumenorrhoic?

We chose a group of patients presenting spontaneous or induced galactorrhea, associated with regular menstrual cycles. Besides a careful evaluation of their prolactinemic levels (see material and methods), these patients underwent a three-month therapy with Bromoergocryptin, a dopaminergic drug widely used in benign and malignant mammary pathology ([11, 12, 13, 14, 15, 16, 17, 18]).

Their mammary condition had been previously evaluated, on the basis of a subjective symptom, mastodynia, through thorough objective examination, mammary cytology and contact thermography.

All variations of these elements, that were re-examined after the three-month Parlodel therapy, are useful to assess the real effectiveness of this therapeutical approach.

## MATERIAL AND METHODS

Among the patients who came to the Senology Center at the Obstetric and Gynecological Clinic of Padua University, we chose those presenting spontaneous or induced *galactorrhea*, and *regular menstrual cycles* (as regards frequency, quantity and duration).

We excluded from this study patients with irregular periods, clinically or cytologically atypical mammary secretions (hematic or purulent secretions, atypical cells etc.) and clinically advanced mastopathies (with gross nodularities).

Eleven patients met the requisites. Their symptomatology, objective examinations, thermographies, mammary cytologies and Prolactin Circadian Rhythms were evaluated.

When evaluating *symptomatology*, we emphasized the presence of mastodynia, classified as light (+), moderate (++) or severe (+++) according to its intensity.

The result of the *objective examination* (with palpation and examination of the supraclavear,

axillary and mammary regions and search of possible spontaneous or induced secretions) was described as: normal findings (n.p.a.), micronodes (localized or diffused), moderate (+) or severe (++) congestive state.

Spontaneous or induced *galactorrhea* (the latter is marked by * in the table) was classified as abundant (+++), moderate (++) or scarce (+).

*Mammary cytology*, stained according to Papanicolau's technique, was read by the same Cytologist.

*Prolactine Circadian Rhythm* was evaluated according to the Ria method (Serono-Biodata Kit) with daily hospitalization. Samples were taken at 9, 12 a.m.; 3, 6, 9, 12 p.m.; 3, 6, 9 a.m.

The *thermographic record* evaluated the following factors: thermic level (decreased, normal, increased) of mammary surface and nipples, any response to the dynamic test (positive or negative), surface vessels congestion and distribution (linear, reticular, ectasic, macular) and presence of any vascular abnormality (sickle or spicule-shaped etc.) regarded as indicating mastosis. The comprehensive evaluation of thermographic findings was carried out according to J. Tricoire's classification, reported in the table.

After the above-mentioned examinations, all patients underwent Parlodel therapy: 2.5 mg/die for three months.

At the end of this therapy, we re-evaluated symptomatology, objective situation, persistence or absence of galactorrhea (in case of persistence, mammary cytology was repeated); thermography and diafanoscopy were performed in all cases.

## RESULTS

Table 1 shows mammary evaluation before and after Bromoergocryptin therapy (2.5 mg/die/os/three months) and maximum Prolactin values (HPRL) found in the Circadian Rhythm (sampling every 3 hours).

## DISCUSSION

As shown in the results table (tab. 1), we found hyperprolactinemia in 4 out of 11 cases. Patients with values exceeding 42 mg/ml ([19]) are regarded as hyperprolactinemic.

Considering that all patients were eumenorrhoic and only one presented spontaneous galactorrhea, the percentage is by no means negligible.

Eight out of ten patients suffering from mastodynia of different intensity, improved to some extent. Apart from patient No 2, in all hyperprolactinemic patients, this symptom was of the highest intensity and completely disappeared after the therapy.

The objective aspect of galactorrhea, present in all cases (spontaneous in one case, induced in the remaining ten) improved in ten patients, decreasing in four cases and disappearing in six. In the normal prolactinemia group this symptom disappeared in six out of seven cases; strangely enough the hyperprolactinemic patients showed only an improvement in three out of four cases: even if in this group the therapy performed was a causal one. May be in this case the posology was insufficient. The favourable result in the normal-prolactinemia group is nevertheless interesting. It can be assumed that there is peripheral oversensitiveness to normal prolactin values.

Given the strict selection of patients included in this study, mammary cytology is expression of a functional type of mammary pathology.

Owing to the same reason, the clinical picture was always moderate: normal in three cases; three patients showed localized micronodularity, mostly in the supra-external quadrants (S.E.Q.); five cases presented diffused micronodes and five others, congestive state.

In the three normal cases, the therapy caused no objective change. The micronodular picture remained unmodified. Only congestion improved, disappearing in two patients and decreasing in three.

With regard to thermographic findings, hyperprolactinemic patients showed the most significant results. In three cases, with equal class, after the therapy, the examination showed reduced surface vascularization, which agrees with the subjective and objective improvement. One case showed a more important improvement,

Table 1. — *Mammary evaluation before and after Bromoergocryptin therapy and maximum Prolactin values (HPRL) found in the Circadian Rhythm.*

| | Age | HPRL ng/ml | Mastodynia | | Galactorrhea | | Mammary cytology | | Obj. exam. mammary | | Thermography | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | pre | post | pre | post | pre | post | pre | post | pre | post |
| 1) C.D. | 27 | 88 | +++ | −−− | +−−* | −−− | foam cells | — | bilat. micronod. congest. ++ | congest. − | A | A <super. vascol. |
| 2) C.G. | 31 | 125 | −−− | −−− | +++ | +−−* | hydroadenoid metaplasia | unchanged only on the left | n.p.a. | n.p.a. | A hyper-thermia | A hyperthermia |
| 3) D.F. | 44 | 46 | +++ | −−− | ++−* | +−−* | foam cells | unchanged | (S.E.Q.) micronodes | unchanged | B+ | B− <super. vascol. |
| 4) M.L. | 29 | 123 | +++ | −−− | ++−* | +−−* | foam cells | unchanged | n.p.a. | n.p.a. | A | A <super. vascol. |
| 5) S.L. | 26 | 33 | +++ | +−− | ++−* | −−− | foam cells | — | (S.E.Q.) micronodes congest. ++ | congest. + | B− mastosis on the left. | B+ bil. mastosis accent. on the left. |
| 6) S.M. | 27 | 31 | ++− | +−− | ++−* | −−− | foam cells | — | n.p.a. | n.p.a. | A | A |
| 7) G.P. | 23 | 27 | +−− | +−− | ++−* | +−−* | foam cells | unchanged | bilateral micronodes | unchanged | B− | B− |
| 8) B.R. | 47 | 26 | +−− | −−− | ++−* | ++−* | foam cells | unchanged | bilat. micronod. congest. ++ | unchanged congest. + | B− | B− |
| 9) B.E. | 19 | 26 | +++ | −−− | ++−* | −−− | foam cells | — | (S.Q.) micronodes congest. ++ | unchanged congest. + | B− | B+ moderate> mastosis on the left. |
| 10) B.L. | 32 | 15 | +−− | +−− | ++−* | −−− | foam cells | — | diffused micronodes | unchanged | A+ | A+ |
| 11) T.R. | 43 | 8 | ++− | +−− | ++−* | −−− | foam cells | — | diffused micronodes congest. ++ | unchanged congest. − | B | B <super. vascol. |

Group A = normal findings. Group B = non-malignant change, cases need watching. Group C = suspect malignancy. Group D = malignant tumour. (by J. Tricoire)

with a reduction of the thermographic picture of mastopathy (from B+ to B−).

Among the seven normal-prolactinemia cases, one showed a reduction of superficial venous ectasia, four presented no variation, two showed a worsened mastosic picture (from B− to B+, from B to B+).

## CONCLUSION

Despite the limited number of cases examined (they all meet strictly selective requirements), in agreement with the literature, we believe that Parlodel therapy has proven its effectiveness in suppressing or improving the symptom "mastodynia" and the sign "galactorrhea" ([11, 12, 13, 14, 15, 16, 17]).

As regards clinical objectivity and thermographic findings, greater caution is advisable in expressing a favourable opinion. In fact, among our eumenorrhoic patients with galactorrhea, only those presenting hyperprolactinemia responded to the therapy with objective and instrumental improvement.

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