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RELATION BETWEEN PROLACTIN RECEPTORS (PRLR), ESTRADIOL (ER) AND PROGESTERONE RECEPTORS (PgR) IN HUMAN BREAST CANCER. J.Ph. Peyrat*, J. Bonneterre*, R. Beuscart**, B. Vandewalle*, J. Lefebvre* and A. Demaille*.
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We have previously found a relation between PRLR and steroid receptors in breast cancer (Eur. J. Cancer Clin. Oncol.,1982). The current study investigated the nature of this relation on a larger breast cancer population. PRLR have been measured in 547 primary breast adenocarcinomas surgically treated in the Centre Oscar Lambret. Free as well as total (after MgCl2 desaturation) PRLR were determined. On the same biopsy ER and PgR were measured using the Dextran Charcoal method and a specimen was reserved for histological examination. ER were found in 81 % of the cases, PgR in 55 %, free PRLR in 43 % and total PRLR in 72 % of the patients. A relation was found by the Spearman test between free PRLR on the one hand, ER ($p=0.02$) and PgR ($p<0.05$) on the other, between total PRLR on the one hand ER ($p<0.001$) and PgR ($p<0.01$) on the other. The representation of PRLR (free or total) as a function of ER (or PgR) showed three groups of values : 1° negative values of ER (or PgR) whatever PRLR levels ; 2° negative values of PRLR (free or total) whatever steroid receptor levels ; 3° positive ER (or PgR) and positive PRLR levels (free or total). Thus the study of the linear correlation had to be restricted to that last group of values. A significant correlation was found between total PRLR on the one hand, ER ($r=0.23$; $n=289$; $p<0.001$) and PgR ($r=0.128$; $n=226$; $p=0.05$) on the other when expressed as log values. No correlation was found between free PRLR and steroid receptors. These results confirm that in human breast cancer steroid receptors (ER and PgR) and PRLR are interlinked.

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PROGNOSTIC SIGNIFICANCE OF PROLACTIN RECEPTORS (PRLR) IN HUMAN BREAST CANCER. J. Bonneterre*, J.Ph. Peyrat*, R. Beuscart**, B. Vandewalle*, J. Lefebvre* and A. Demaille* - * Centre Oscar Lambret, Lille and ** Centre d'Etude et de Recherche en Informatique Médicale, Faculté de Médecine, Lille, France.

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PROLACTIN LEVEL MONITORING DURING TREATMENT FOR ADVANCED BREAST CANCER.

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Prolactin (PRL) serum levels were measured by RIA method in 130 postmenopausal patients with progressive metastatic breast cancer. Hyperprolactinemia (>20 ng%) was seen in 26 cases (20%) and values were >40 ng% in 10 patients (8%). There was no correlation between PRL levels and free interval, dominant lesion, menopausal status, prior treatments and response to the subsecuent treatment. Hyperprolactinemic patients did not respond worse than patients with PRL normal levels. 87 patients were treated with hormonal therapy or chemotherapy. The PRL determination was repeated after 30 days of treatment (or one cycle of chemotherapy) and subsequently every 2-3 months. Even though the mean PRL levels did not change after 30 days of treatment in the overall group, they decreased ($p<0.05$) in 27 responders (CR+PR) and, on the contrary, increased ($p<0.01$) in 60 non responders (NC+P). In particular 17/22 (77%) patients with a >20% decrease in the PRL levels were responders while 49/53 (92.5%) patients with a >20% PRL increase were non responders. Most of these variations fall in the range of normal values. Furthermore, PRL levels increased when responsive patients presented a relapse of the disease. The correlation between PRL levels and response to therapy did not depend on the type of treatment.
PRL level reflects the course of metastatic breast cancer during the treatment and its monitoring could be of clinical usefulness.

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CLINICAL EXPERIENCES WITH TERGURIDE IN PATIENTS WITH GROWTH HORMONE AND/OR PROLACTIN SECRETING PITUITARY ADENOMAS

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Terguride, the 9,10-transdihydro analogue of lisuride is a new partial dopamine agonist. In animal experiments as well as in human pharmacological and preliminary clinical studies, terguride has been proven to be very effective in lowering prolactin (PRL) secretion indicating a very good tolerance when compared with "pure" dopamine agonists e.g. lisuride or bromocriptine.
The treatment with terguride (0,25 up to 3 mg/day p.o.) varied and lasted for several weeks up to a maximum of 20 months. The endocrinogical monitoring included all routine laboratory tests and hormone analyses, especially the follow-up data of basal and stimulated PRL and growth hormone (GH) levels. In some patients terguride was tried in comparison with bromocriptine and/or lisuride (in an open cross-over design). In most patients the laboratory findings were substantiated by sequential CT and NMRT imaging studies.
In all patients with prolactinomas terguride proved to be clinically and endocrinologically effective. PRL levels were always and most distinctly lowered already within the first days of treatment - the most tremendous fall was found in one patient from 7168 ng/ml to 32 ng/ml within 2 weeks caused by 0,25 mg t.i.d. terguride (3x1 tbl.). In four cases with macroprolactinomas clinical symptoms e.g. headaches and visual field defects improved in the early stage of treatment and in two cases a clear-cut tumour-size reduction could be objectivated by CT and NMRT studies. In all patients - with or without active acromegaly - the GH levels remained unaltered throughout the different treatment regimens.
The most important finding was that terguride was tolerated without any major side effects. In general, terguride seems to be much better accepted in our patients when compared with lisuride and bromocriptine. It, therefore, may be possible to dissociate effects of dopamine agonists on prolactin-producing cells from their influence on other systems regulating GH or related to side effects.