

SUMY STATE UNIVERSITY
MEDICAL INSTITUTE



**BIOMEDICAL
PERSPECTIVES**

II

ABSTRACT BOOK

*International Scientific Conference
of Students, Postgraduates and Young Scientists*

(Sumy, October 20-22, 2020)

Sumy
Sumy State University
2020

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
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THE ROLE OF PROLACTIN RECEPTOR EXPRESSION IN THE DEVELOPMENT OF BENIGN BREAST PATHOLOGY

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Introduction. Today, hyperprolactinemia is considered as one of the main causes of breast pathology (BP) in women of reproductive age.

Aim. To investigate the relationship between the expression of prolactin receptors (PRL-R) and serum prolactin (PRL) in benign breast tumors and normal breast tissue.

Materials and methods. In the study involved 16 women with benign breast tumors (BBT) – fibroadenomas. The control was 16 samples of intact tissues of the same patients. All patients had serum PRL levels evaluated, and women divided into groups according to elevated serum PRL levels (8 women) and normal levels (8 women), and macroscopic, histological, and immunohistochemical postoperative studies were performed.

Statistical data processing was performed using Microsoft Excel 2010 with the application AtteStat 12.0: determination of the normality of the sample by the Shapiro-Wilk criterion, the Pearson correlation coefficient (r) and the reliability of the differences (p).

Results. The mean age of the women in the study was 27.9 ± 1.55 years, with an age range from 19 to 39 years. The average level of prolactin in the serum of the studied women corresponded to the value of 496.23 ± 79.9 IU / l, which exceeded the normal value of this hormone.

In the group of women with elevated serum PRL, a strong significant correlation was found ($p < 0.01$; $p = 0.92$) between PRL-R expression in BBT tissue and intact breast tissue in patients. There was a negative association of medium strength between age and PRL-R expression in BBT tissue and intact tissue ($p = -0.31$ and $p = -0.43$), respectively.

For patients with normal serum PRL levels, there is a strong positive significant association between PRL-R expression in BBT tissue and PRL levels ($p < 0.05$; $p = 0.8$).

Conclusions. The data obtained indicate that the increased level of expression of prolactin receptors in intact tissue is combined with a high level of expression of the same receptors in BBT tissue. There is a tendency to decrease the expression of prolactin receptors with age, which corresponds to age-related involutinal changes. A relationship was found between the expression of prolactin receptors in BBT and serum prolactin levels within the upper limits of norm.

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