Published Date: - 30-09-2025
Page No: - 213-215

The Role Of Biochemical Tests In Breast Cancer Prevention

Khomidova Tursunoy Ergashboy kizi
Fergana State University, Uzbekistan

Abstract
Blood analyzes aimed at preventing breast cancer determine the amount of several biomarkers for the purpose of complex treatment. The diagnostic and prognostic significance of biochemical indicators of cases of mammary cancer was analyzed. The purpose of the study is to assess the importance of biochemical indicators in the initial detection of processes taking place in the tissues of the mammary gland.

Keywords: - Breast cancer, biochemical analysis, diagnosis, pre-cancer,indicators, blood parametrs.

Introduction
Breast cancer is now one of the most common and common oncological diseases among women. In the early detection of the disease, preventing the development of cancer, timely effective treatment of pre-cancer cases is important. Since morphological changes in the early stages of cancer of the mammary gland do not give a clear sign, biochemical examinations are of diagnostic importance[1]. Biochemical tests analyze changes in the body, oxidative stress levels, hormone balance, and enzymatic activity. It has been observed that these processes undergo significant changes in precancerous conditions[2].

Research Materials And Methods
The study involved 200 women. Of these, 107 were selected as mammary cancer patients and 93 were selected as the conditionally healthy women control group. The amount of indicators from their venous blood was determined, such as glucose, ALT, AST, total protein, mochevina, bilirubin, etc. The data obtained was analyzed statistically and compared with the control group.

Results
The table below compares changes in biochemical markers in patients with breast cancer and in conditionally healthy women.

Table 1
Clinical and biochemical parameters of fertile and menopausal women with breast cancer precursors

Biochemical indicators	Normal performance	Indicators in patiens of fertile age	Indicators in menopausal patients

Glucose mmol/l	4.70±0.32	6.83±0.45*	7.63±0.45*
ALT, unit/ l	0.43±0.02	0.71±0.05*	0.75±0.06*
AST, unit/l	0.31±0.02	0.51±0.03*	0.59±0.04**
Mochevina	5.80±0.31	7.50±0.57*	9.04±0.61**
Creatinine	70.3±4.3	72.1±4.7	97.9±6.5*
Total protein	74.6±4.2	63.9±4.1*	66.1±4.5*
Total bilirubin µmol/l	12.6±1.1	21.3±1.5**	23.2±1.4**
Conjugated bilirubin µmol/l	3.09±0.22	4.3±0.31*	4.01±0.25*
Free bilirubin µmol/l	9.40±0.75	16.9±1.21*	18.7±1.4**

According to the results of the study, significant changes in the amount of glucose, ALT, AST, creatinine, mochevina, total protein Hamm were observed in the amount of bilirubin [3]. Changes in the body appear in most cases before the appearance of symptoms of the disease. Therefore, biochemical analyzes are important in cases where mammary cancer has taken place [4,5]. It is considered necessary to carry out these examinations before starting treatment [5]. The study compared the rates of women of childbearing age and menopause. Statistical analysis was carried out.

Conclusion

Biochemical analyzes in cases of mammary cancer were also analyzed for diagnostic and prognostic significance. Changes in the state of cancer of the mammary gland directly affect oxidative stress activation in cells, disruption in metabolism, changes in cell membranes and hormonal imbalances directly affect the proliferative States of the mammary gland. The above indicators are important in early diagnosis.

References

1. Udi Zelig, Eyal Barlev, Omri Bar, Itai Gross, Felix Flomen, Shaul Mordechai, Joseph Kapelushnik, Ilana Nathan,Hanoch Kashtan, Nir Wasserberg, Osnat Madhala-Givon.“Early detection of breast cancer using total biochemical analysis of peripheral blood components: a preliminary study” BMC Cancer 2015 May.15;15:408.
2. M.J.Duffy.” Biochemical markers in breast cancer: which ones are clinically useful?”, Volume 34, Issue 5, July 2001, Pages 347-352

Published Date: - 30-09-2025

3. Smriti Shreya, Anusmita Shekher, Puneet Puneet, Shyam Babu Prasad, Buddhi Prakash Jain. "Haematological and biochemical analysis of blood samples from early and late stage breast cancer patients in India". Bioinformation.2023 Jul 31;19(7):806–809.
4. Naval Kishor Yadav, Bibek Poudel, C Thanpari, Bidhan Chandra Koner. "Assessment of Biochemical Profiles in Premenopausal and Postmenopausal Women with Breast Cancer", Asian Pacific Journal of Cancer Prevention, Vol 13, 2012., 3385-3388
5. Kyae Mhon Htwe, Thet Oo Wai, Saw Ohmnmar Khin, Thandar Myint Thaw, Tin Moe Win, Yi Yi Myint. "Biochemical Profile of Breast Cancer Patients Attended the Out-Patient Department of Cancer Unit, Mandalay General Hospital, Myanmar". Journal of Biological Engineering Research and Review, 2017; 4(2): 18-22