

46. **ASSOCIATION OF REPRODUCTIVE PARAMETERS WITH DERMATOGLYPHICS IN BREAST CANCER PATIENTS, HEALTHY AND HIGH-RISK INDIVIDUALS.**

Rahul Rangan<sup>1</sup>, Swapna A. Shedje<sup>2</sup>, Satish V. Kakade<sup>3</sup>.

<sup>1</sup> MBBS. Krishna Institute of Medical Sciences, Karad, Maharashtra, India.

<sup>2</sup> MD. PhD. Krishna Institute of Medical Sciences, Karad, Maharashtra, India.

<sup>3</sup> PhD. Krishna Institute of Medical Sciences, Karad, Maharashtra, India.

**INTRODUCTION:** Breast cancer has a wide array of risk factors, and its confounding reproductive aetiologies have been paramount in defining the predictive ability of the disease. Similarly, a strong link between qualitative dermatoglyphic patterns and predisposition to breast cancer has been well documented through genetic linkage. Therefore, this study aimed to discern the affiliation between the aforementioned risk factors of breast cancer. **METHODS:** The study was carried out in 3 groups of 90 age-matched individuals of - breast cancer patients, high-risk individuals and healthy individuals. A detailed reproductive history was taken including factors such as age at menarche, menstrual regularity, age at menopause (if attained), breastfeeding, obstetric parameters and age at first live birth. Qualitative dermatoglyphics were procured through the standardised ink and paper method to get a remarkable rolled fingerprint. The variations in gynaecological and obstetric parameters and qualitative dermatoglyphic patterns were studied and their significance was computed using the chi-square test on InStat software where p values < 0.05 were considered significant with a 95% confidence interval. **RESULTS:** Highly significant values (p<0.0001) were found in all gynaecological and obstetric parameters where a higher frequency of whorls in breast cancer patients, arches in high-risk individuals and an equivalent frequency of arches and whorls were predisposed to healthy individuals. **LIMITATIONS:** Although this study might have identified certain predominating patterns with higher frequency, the consistency might vary from place to place due to differing dermatoglyphics according to ethnicity. A small number of patients receiving chemotherapy experienced - chemotherapy-induced adermatoglyphia - where the loss of fingerprints or very faint fingerprints was difficult to perceive. These patients were not included in the study to ensure maximum efficacy in interpreting the dermatoglyphics. **CONCLUSION:** Previous attempts failed to link dermatoglyphic indices and reproductive parameters, this study found a significant correlation between the variables in the three distinct groups. Most breast cancer patients are diagnosed late with a majority presenting to doctors in advanced stages where survival rates are marginal, so by this method, we can get a simple, practical, non-invasive and easily affordable screening technique for the above risk factors. This technique could also be employed for non-symptomatic women who might have a positive family history of breast cancer as a part of risk assessment for early diagnosis and treatment. Therefore, paving way for further research into the prognostic abilities of gynaecological parameters through qualitative dermatoglyphic indices.

**Key words:** Breast Neoplasm; Dermatoglyphics; Menarche; Menopause; Parity.