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517 - DERMOSCOPY OF THE PAPILLA TO THE IDENTIFICATION OF HUMAN PAPILLOMAVIRUS SIGNS IN TEN BREAST CANCER PATIENTS COMPARED TO TEN CONTROLS WITHOUT BREAST COMPLAINTS

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Introduction: The etiologic role of human papillomavirus (HPV) in breast cancer has been investigated. It is inferred that HPV may be involved in breast carcinogenesis, although the effect-cause nexus has not yet been proved. To develop minimally invasive methods that would help identify the virus in the breast, dermoscopy of the mammary papilla arised. The use of the dermoscope aims to determine a pattern of HPV-infected nipples in women with breast cancer, contributing to establish the relation between HPV and breast cancer. If the presence of HPV in the nipple could be diagnosed, a significant step would be taken to identify women at risk of developing cancer. The possibility of a noninvasive method collaborating for the diagnosis of early breast cancer is extremely useful in daily care. ***Objectives:*** The aim of this study was to investigate the use of dermoscopy in the search for signs of HPV in the mammary papilla by comparing 10 cases (patients with breast cancer) and 10 controls (patients without breast cancer) and the possibility of a positive relationship between HPV infection and breast alterations. ***Methods:*** In all, 196 patients attended an appointment at the mastology department in a reference center for breast cancer. They were studied with a dermoscope in conjunction with a 2-mm puncture biopsy to obtain genetic material. DNA samples were extracted using the DNeasy Blood & Tissue Kit (Qiagen, Hilden, Germany), followed by PCR amplification for the conserved HPV E6-E7 region. Then, 20 patients were selected by HPV findings identified on the images, which were stored on the FotoFinder Hub platform. ***Results:*** In the pilot project, 10 cases and 10 controls were selected. These patients were submitted for a dermoscopy and puncture biopsy to evaluate the possibility of HPV infection. Of the 10 cases, 3 showed positive HPV typing test result and exhibited an invasive carcinoma of no special type. Of the 10 controls, 4 had a positive test. Although these four patients did not have cancer, they presented other benign alterations, such as fibroadenomatoid hyperplasia of the breast and granulomatous mastitis, which corroborates the hypothesis that HPV may cause replication of malignant and benign cells. Furthermore, the cases that tested positive for HPV showed on the dermoscopy images intriguing alterations, such as increased vascularization, pigmentation changes, exacerbation of the cobblestone pattern, crevice-shaped nipple opening, and inflammatory lesions that were not observed on the images of the patients that had a negative HPV test result. ***Conclusion:*** The dermoscopy of the papilla is able to find signs indicative of HPV presence. For that reason, the dermoscope can be a useful tool in risk stratification and early diagnosis of breast cancer, considering that HPV might be involved in breast cancer's carcinogenesis and other benign alterations.