Basal Cell Carcinoma: Epidemiological Analysis of a 5-Year Period in a Brazilian City with a High Level of Solar Radiation

Authors : Maria E. V. Amarante, Carolina L. Cerdeira, Julia V. Cortes, Fiorita G. L. Mundim

Abstract : Basal cell carcinoma (BCC) is the most prevalent type of skin cancer in humans. It arises from the basal cells of the epidermis and cutaneous appendages. The role of sunlight exposure as a risk factor for BCC is very well defined due to its power to influence genetic mutations, in addition to having a suppressor effect on the skin immune system. Despite showing low metastasis and mortality rates, the tumor is locally infiltrative, aggressive, and destructive. Considering the high prevalence rate of this carcinoma and the importance of early detection, a retrospective study was carried out in order to correlate the clinical data available on BBC, characterize it epidemiologically, and thus enable effective prevention measures for the population. Data on the period from January 2015 to December 2019 were collected from the medical records of patients registered at one pathology service located in the southeast region of Brazil, known as SVO, which delivers skin biopsy results. The study was aimed at correlating the variables, sex, age, and subtypes found. Data analysis was performed using the chi-square test at a nominal significance level of 5% in order to verify the independence between the variables of interest. Fisher's exact test was applied in cases where the absolute frequency in the cells of the contingency table was less than or equal to five. The statistical analysis was performed using the R® software. Ninety-three basal cell carcinoma were analyzed, and its frequency in the 31-to 45-year-old age group was 5.8 times higher in men than in women, whereas, from 46 to 59 years, the frequency was found 2.4 times higher in women than in men. Between the ages of 46 to 59 years, it should be noted that the sclerodermiform subtype appears more than the solid one, with a difference of 7.26 percentage points. Reversely, the solid form appears more frequently in individuals aged 60 years or more, with a difference of 8.57 percentage points. Among women, the frequency of the solid subtype was 9.93 percentage points higher than the sclerodermiform frequency. In males, the same percentage difference is observed, but sclerodermiform is the most prevalent subtype. It is concluded in this study that, in general, there is a predominance of basal cell carcinoma in females and in individuals aged 60 years and over, which demonstrates the tendency of this tumor. However, when rarely found in younger individuals, the male gender prevailed. The most prevalent subtype was the solid one. It is worth mentioning that the sclerodermiform subtype, which is more aggressive, was seen more frequently in males and in the 46-to 59-year-old range.

Keywords : basal cell carcinoma, epidemiology, sclerodermiform basal cell carcinoma, skin cancer, solar radiation, solid basal cell carcinoma

Conference Title : ICCDDD 2021 : International Conference on Clinical Dermatology and Dermatological Diseases **Conference Location :** New York, United States **Conference Dates :** December 09-10, 2021