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Mahima Advaita

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Carcinoma Cervix and Diabetes mellitus: A Case control Study among Women seeking Health care in Tertiary Hospitals of South India.

Abstract

Background: A consensus report was drafted by the combined efforts of experts from the American Diabetes Society and the American Cancer Society to review the association between the incidence of cancer and diabetes, common risk factors, biologic links and correlation between diabetes treatment and the risk of cancer. They discovered that Type 2 Diabetes may increase the risk of certain cancers (liver, pancreas, endometrium) but the evidence relating Diabetes and Cervical Cancer was inconclusive. This association was extrapolated to be probable due to the shared risk factors which were classified as non-modifiable (age, sex) and modifiable (diet, physical activity, alcohol, smoking). The biologic link established involved hyperglycaemia, hyper-insulinemia with stimulation of IGF-1 axis and inflammation with early evidence showing that metformin may be associated with lower risk of cancer and exogenous insulin with increased risk. **Objective:** To look for the Association between Carcinoma Cervix and Diabetes Mellitus among women. **Methodology:** A total of 120 post-menopausal women diagnosed with carcinoma of cervix were recruited for analysis. A pre-tested diabetes questionnaire was given. Patients were grouped according to their diabetic history. Data was analyzed using statistical package for social sciences (SPSS) version 11.5. $p \leq 0.05$ was taken as significant. **Result:** It was seen in our study that 29% of the patients were 60 to 70 years of age, signifying that such ages are at potential risk of cervical cancer in India. A majority (40%) of the women with cervical cancer were multiparous with a parity score greater than P3L3 up to P10L9. Among the cases, the most common histological subtype is poorly differentiated large cell non-keratinizing squamous cell carcinoma (36%), followed by moderately differentiated squamous cell carcinoma (27%). Both cases and controls predominantly took Metformin for the control of Diabetes and hence we cannot draw any conclusions regarding the risk reduction. **Conclusion:** The present study revealed a significant positive association between Diabetes and CA cervix in post-menopausal women, which means that diabetes is a risk factor for cervical cancer and may be implicated in poor prognosis. We can conclude that diabetic post-menopausal women have a higher risk of contracting cervical cancer and must undergo regular screening. Further studies can be conducted for a longer duration to generalize the findings.

Keywords: Diabetes mellitus, carcinoma of cervix, post-menopausal women, prognosis, non-keratinizing squamous cell carcinoma