

Survivin Expression In Breast Carcinoma and Its Correlation With Clinicopathological Features:ImmuohistochemicalStudy

Thesis

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ABSTRACT

Background: Breast cancer (BC) is the most common type of cancer among women world-wide and a leading cause of cancer related deaths. Survivin is the smallest member in the inhibitor of apoptosis (IAP) gene family. It has a potential dual role in inhibition of apoptosis by inhibiting caspase-9 and cell proliferation via regulation of mitosis. Survivin overexpression in cancer promotes survival of aneuploid cells, facilitates bypassing of cell cycle checkpoints and increases angiogenesis, thereby using its cytoprotective character to ensure tumor progression.

Objectives: Investigation of immunohistochemical expression of survivin in breast carcinomas and correlation with the clinico-pathological aspects & molecular subtypes of the tumors.

Materials and methods: 60 formalin fixed paraffin embedded BC tissue sections were randomly collected. Both epidemiological data and molecular subtypes were collected from the patients' reports. The paraffin blocks were sectioned, stained with hematoxylin & eosin stains for histologic evaluation. Additional sections were immune stained with survivin.

Results: Survivin expression was detected in 58.3% of cases and showed statistically significant correlation with higher tumor grade, large tumor stage, cases with lymphovascular invasion (LVI), Oestrogen, progesterone receptor negativity, high Ki-67 index, Human epidermal growth factor receptor type 2 (HER-2/Neu) enriched subtype and Triple negative subtype (TN) (P value < 0.05).

Conclusion: Survivin expression is associated with poor prognostic factors & triple negative subtype and HER-2/Neu enriched molecular subtype.

Key words: Breast cancer - Survivin - Triple negative .