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Prognostic and Predictive Values of Cell Cycle Proteins Centrosomal Protein 5 (CEPP 5) and Cyclin D1 Expression Inepithelial Ovarian Carcinoma (EOC)

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Background: Disturbances in the expressions of centrosomal proteins (CEPs) and regulatory proteins that control G1-Sphase transition, like cyclins could participate in dysregulation of cell cycle control that has been incriminated in the pathogenesis of several malignancies. Centrosomal protein 55 (CEP55) has an important role in participation in the final stage of cell division, and cell cycle progression. CEP55 and Cyclin D1 expressions were detected in several tumors but their prognostic and predictive roles in epithelial ovarian carcinoma (EOC) are still studied.

Aim of the study was to explore tissue expressions of CEPP55 and Cyclin D 1 in EOC correlating their expression with pathological, clinical and prognostic parameters.

Methods: CEP55 & Cyclin D1 expressions were evaluated in tissue biopsies that are retrieved from 60 cases of epithelial ovarian carcinoma using immunohistochemistry, patients that were followed up for 3 years. The relationship between their level of expressions and degree of differentiation, spread of the tumor, disease recurrence, response to therapy and survival were studied.

Results: CEP55 expression in EOC was positively correlated with loss of differentiation of the tumor, presence of L.N ($p<0.001$), and distant metastases ($p=0.012$) & advanced stage of the tumor ($p=0.007$), cyclin D1 expression in EOC was positively correlated with loss of differentiation & advanced stage of the tumor, presence of L.N ($p<0.001$), and distant metastases ($p=0.009$). CEPP 55 & Cyclin D1 were positively correlated with each other.

Low CEPP 55 & Cyclin D1 expressions were strongly correlated with optimal surgical eradication of the tumor, increased 3-year overall survival (OS) and low incidence of tumor recurrence after therapy ($P <0.001$).

Conclusion: High levels of expression of CEPP 55 & Cyclin D1and are markers of poor prognosis in EOC patients.

Keywords: CEP55, Cyclin D1 epithelial ovarian carcinoma, immunohistochemistry; prognosis

Biography:

Dr. Ola A Harb, MD; completed her Pregraduate Medical Education (December 2005) in M.B.B.CH., with Total grade-Excellent from Zagazig University, Egypt. She obtained her Postgraduate/M.Sc (May, 2010) & M. D. (January 2015) in pathology from Zagazig University, Egypt. Dr. Ola is presently working as a Lecturer, at Department of pathology, Faculty of Medicine, Zagazig University, Egypt.