

ANALYTICAL STUDY OF CORRELATION BETWEEN PLASMA D-DIMER LEVELS AND LYMPHOVASCULAR INVOLVEMENT IN OPERABLE CARCINOMA BREAST

INTRODUCTION:

Various abnormalities, including thrombocytosis, an increase in fibrinogen and fibrin degradation products like D-dimer, a rise in factors V, VII, VIII, IX, and XI levels, and a decrease in antithrombin III, are seen in cancer patients. D-dimer (or D dimer) is a fibrin degradation product (or FDP), a small protein fragment present in the blood after a blood clot is degraded by fibrinolysis.

Pre-operative plasma D-dimer levels will be analyzed in operable Carcinoma Breast Pre operatively and TNM Staging will be done according to American Joint Committee on Cancer (AJCC). Modified radical mastectomy done for the following patients.

Post operative HPE report for lymphovascular invasion, Stage of carcinoma breast compared to d-dimer levels.

D-DIMER: Normal range < 0.5 µg FEU/ml

During the study period February- September 2018, 90 cases of operable carcinoma breast taken for study purpose

BODY:

In our study out of 90 patients, stage I – 5 patients (5.6%), stage II- 52 patients (57.8%), stage III- 33 patients (36.7%). In our study out of 90 operable carcinoma breast patients, post-operative Modified Radical Mastectomy histopathology report

showed 74 patients with lymphovascular invasion present(82.2%), 16 patients with no lymphovascular invasion(17.8%).

D-dimer being compared with stages of the Carcinoma breast using Krushal-Wallis test, results being No significance (p value >0.050) between d-dimer levels in stage I and stageII patients but highly significant (p value <0.01) between stage I and stage III and significant ($0.01 < p < 0.050$) between stage II and stage III. By using t-test lymphovascular invasion present in 74 patients had mean d-dimer value and standard deviation being 0.63 and 0.24 respectively and with no lymphovascular invasion d-dimer value being 0.10, being statically significant (pvalue <0.0005)

CONCLUSION:

Our study of D-Dimer with lymphovascular invasion in operable carcinoma breast clearly shows d-dimer levels increased in carcinoma breast patients especially with advancing stage of the tumor. Increased d-dimer can be considered as a potential biomarker for tumor size, lymph node involvement and lymphovascular invasion and early tumor metastasis in operable carcinoma breast[12].

Since d-dimer is a safe, easily available predictive and convenient marker it can be viewed as a potential prognostic marker for operable carcinoma breast.