Analysis expression of ZIP1 and caspase-3 protein in adenocarsinoma of the prostate

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Abstrak

Objective: Carcinogenesis of adenocarcinoma of the prostate occurs due to dysregulation of zinc level within the cells. Intracellular zinc molecules influx is regulated by a transporter protein ZIP1, whose non-presence is predicted to inhibit apoptosis, thus leads to the development of prostate adenocarcinoma. Methods: This study was aimed to analyze the correlation of ZIP1 and Caspase-3 expression in prostate adenocarcinoma on its grading as represented by Gleason Score. This was a cross-sectional, retrospective analytical study on 31 formalin-fixed, paraffin-embedded tissue that meets inclusion criteria. The specimen was stained using the immune-histochemistry technique for ZIP1 and Caspase-3. Protein expression of each case was counted using ImageJ analysis. Gleason score was acquired as secondary data from the cases?s reports. The correlation of their expression with respect to Gleason score was analyzed with Pearson?s correlation using SPSS 11.5. Results: Mean expression level of ZIP1 and Caspase-3 in prostate adenocarcinoma were 35% and 33%, respectively. There was a significantly positive correlation between ZIP1 and Caspase-3 expression (r = 0.379; p = 0.018). However, their correlation was stronger in intermediate-grade group (r = 0.73; p = 0.01) and the correlation was much weaker in high-grade group (r = 0.04; p = 0.48). Conclusions: There was a positive correlation between ZIP1 and Caspase-3 expression in prostate adenocarcinoma.;