

Patogenesis dan Kesintasan Satu Tahun Pasien Pancreatic Ductal Adenocarcinoma: Kajian Peran Cyclooxygenase-2, Nuclear Factor Kappa-B, Specificity Protein 1, dan Activator Protein-1 = The Role of Cyclooxygenase-2, Nuclear Factor Kappa-B, Specificity Protein 1, and Activator Protein-1 in the Pathogenesis and the One-Year Survival Rate of Patients with Pancreatic Ductal Adenocarcinoma

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Abstrak

Inflamasi kronik adalah proses yang penting dalam patofisiologi adenokarsinoma duktal pankreas (PDAC). Beberapa studi telah meneliti potensi enzim siklooksigenase-2 (COX-2) sebagai faktor prognostik PDAC, dengan hasil yang kontradiktif. Nuclear factor kappaB (NF κ B), specificity protein 1 (Sp1), dan cJun adalah faktor transkripsi gen COX2. Penelitian ini adalah studi observasional eksploratori yang bertujuan untuk mengidentifikasi asosiasi ekspresi protein NF κ B (RelA/ p65), COX2, Sp1, dan cJun dengan kesintasan pasien PDAC. Ekspresi protein tersebut dinilai di jaringan pasien PDAC menggunakan metode imunohistokimia. Diidentifikasi ekspresi keempat protein tersebut dengan overall survival (OS) dan karakteristik klinikopatologis pasien PDAC. Sebanyak 53 jaringan PDAC dari biopsi atau reseksi kanker diikuti dalam penelitian. Hasilnya terdapat korelasi antara keempat protein di jaringan kanker. Ekspresi NF κ B sitoplasmik (aHR = 0.31; 95% CI 0.11–0.90; p = 0.032) atau nuklear (aHR = 0.22; 95% CI 0.07–0.66; p = 0.007) berhubungan secara independen dengan prognosis pasien yang lebih baik. Protein lainnya tidak berhubungan dengan kesintasan pasien. Hal ini menunjukkan bahwa peran inflamasi di PDAC lebih kompleks dari yang diperkirakan sebelumnya.

.....Chronic inflammation is a crucial driver of carcinogenesis in pancreatic ductal adenocarcinoma (PDAC). Several studies have investigated the prognostic significance of cyclooxygenase2 (COX2) expression in PDAC patients, obtaining conflicting results. Nuclear factor kappaB (NF κ B), specificity protein 1 (Sp1), and cJun are known as the transcription factors of the COX2 gene. This exploratory observational study investigated the association of the NF κ B, COX2, Sp1, and cJun expressions with patient survival in PDAC. We used the immunohistochemical method to detect the PDAC tissue expressions of NF κ B (RelA/p65), COX2, Sp1, and cJun. The expressions of these proteins were correlated with the overall survival (OS) and other clinicopathological characteristics of PDAC patients. We obtained 53 PDAC specimens from resections and biopsies. There were significant correlations between the four proteins' expressions in the PDAC tissues. The expression of the cytoplasmic (aHR = 0.31; 95% CI 0.11–0.90; p = 0.032) or nuclear NF κ B (aHR = 0.22; 95% CI 0.07–0.66; p = 0.007) was independently associated with a better prognosis in the PDAC patients. COX2, Sp1, and cJun showed no significant association with a prognosis in the PDAC patients. The PDAC patients who expressed NF κ B had a better prognosis than the other patients, which suggests that the role of inflammation in PDAC is more complex than previously thought.