

HUBUNGAN EKSPRESI P53, Bcl-2, c-Myc dan MMP-9 DENGAN  
GAMBARAN KLINIKOPATOLOGIS PADA PENDERITA KARSINOMA  
SEL SKUAMOSAS KEPALA DAN LEHER  
DI RSUD dr. ZAINOEL ABIDIN

Intisari

**Latar belakang :** Karsinoma sel skuamosa kepala dan leher merupakan salah satu kanker tersering diseluruh dunia. Meskipun pendekatan pengobatan agresif dan multidisiplin, belum ada peningkatan yang signifikan dalam kelangsungan hidup 5 tahun selama 20 tahun terakhir. Kegagalan pengobatan terjadi dalam bentuk kekambuhan lokoregional, metastasis jauh, dan / atau tumor primer kedua. Berbagai penanda molekular tumor telah diteliti untuk mengetahui potensi mereka dalam memprediksi hasil penyakit atau respon terhadap terapi.

**Tujuan:** untuk mengetahui hubungan ekspresi protein P53, Bcl-2, c-Myc dan MMP-9 berdasarkan gambaran klinopatologis karsinoma sel skuamosa kepala dan leher di Rumah Sakit dr. Zainoel Abidin.

**Subyek dan Cara Penelitian:** Sampel terdiri dari 60 blok parafin karsinoma sel skuamosa kepala dan leher. Prosedur pewarnaan imunohistokimia dilakukan dengan menggunakan antibodi monoklonal terhadap P53, Bcl-2, c-Myc dan MMP-9. Ekspresi protein P53, Bcl-2, c-Myc dan MMP-9 dianalisis secara imunohistokimia pada karsinoma sel skuamosa kepala dan leher kemudian hasilnya dihubungkan parameter klinikopatologis seperti usia, jenis kelamin, lokasi tumor, diferensiasi tumor, metastasis kelenjar getah bening dan stadium tumor dan dinalisa secara statistik dengan *chi square*.

**Hasil:** Hasil penelitian menunjukkan terdapat hubungan bermakna tingkat ekspresi P53 dengan metastasis lokal ( $p=0.021$ ) dan ada hubungan bermakna tingkat ekspresi MMP-9 dengan lokasi tumor ( $p=0.026$ ). Tidak terdapat hubungan ekspresi P53, Bcl-2, cMyc dan MMP-9 berdasarkan usia, jenis kelamin, stadium yumor, diferensiasi histology, tingkat T, N dan metastasis jauh.

**Kesimpulan:** Ada hubungan ekspresi P53 dengan metastasis kelenjar limfe regional dan ada hubungan ekspresi MMP-9 dengan lokasi tumor pada karsinoma sel skuamosa kepala dan leher.

**Kata kunci:** Karsinoma sel skuamosa kepala dan leher, P53, Bcl-2, c-Myc, MMP-9.

**CORRELATION OF P53, Bcl-2, c-Myc and MMP-9 EXPRESSION WITH CLINICOPATHOLOGIC PARAMETER IN HEAD AND NECK SQUAMOUS CELL CARCINOMA PATIENT AT dr. ZAINOEL ABIDIN HOSPITAL**

**Abstract**

**Background:** Head and neck Squamous cell carcinoma is one of the most common cancers worldwide. Although aggressive and multidisciplinary approach to the treatment has been done, there was no significant improvement in 5-year survival for last 20 years. Treatment failure occurred in the form of locoregional recurrence, distant metastasis, and / or a second primary tumor. A variety of tumor molecular markers have been studied to determine their potential in predicting disease outcome or response to therapy.

**Purpose:** To investigate correlation P53, Bcl-2, c-Myc and MMP-9 expression to clinicopathologic parameter in head and neck squamous cell carcinoma patient at dr. Zainoel Abidin hospital.

**Materials and methods:** The sample consisted of 60 paraffin blocks of head and neck squamous cell carcinoma. Procedures was performed immunohistochemical staining using monoclonal antibodies against p53, Bcl-2, c-Myc and MMP-9. Expression of P53 protein, Bcl-2, c-Myc and MMP-9 was analyzed by immunohistochemistry in head and neck squamous cell carcinoma and then the results are linked clinicopathologic parameters such as age, sex, tumor location, tumor differentiation, lymph node metastasis and tumor stage and statistically analysis with chi square.

**Results:** The results showed there are a significant correlation P53 expression level with local metastasis ( $p = 0.021$ ) and significant correlation MMP-9 expression levels with tumor location ( $p = 0.026$ ). There was no relationship expression of P53, Bcl-2, cMyc and MMP-9 expression based on age, sex, stage tumor, histologic differentiation, level of T, N, and distant metastases.

**Conclusion:** There are relationships between P53 expression with local metastatic and MMP-9 expression with tumor location in head and neck squamous cell carcinoma.

**Keywords:** Squamous cell carcinoma of the head and neck, P53, Bcl-2, c-Myc, MMP-9.