Hubungan HPV dengan Hipoksia terhadap Respon Radiasi pada Karsinoma Sel Skuamosa Rongga Mulut dan Orofaring = The Radiation Response to Oral Cavity and Oropharyngeal Squamous Cell Carcinoma in Association with Human Papilloma Virus and Tumor Hypoxia

Ginting, Hezron Kurnia, author

Abstrak

Latar belakang: Infeksi Human Papilloma Virus (HPV) merupakan salah satu faktor etiologi KSS (Karsinoma Sel Skuamosa) kepala dan leher serta mempengaruhi hasil terapi. Hipoksia tumor menunjukkan respon terapi yang buruk pada sebagian besar keganasan, termasuk KSS. Studi ini bertujuan mengevaluasi karakteristik HPV dan hipoksia dalam KSS rongga mulut dan orofaringeal serta kaitannya terhadap respons radiasi.
Metode: Penelitian eksperimental pada KSS rongga mulut dan orofaring yang telah menjalani terapi radiasi di Departemen Radioterapi antara Januari 2013 hingga Desember 2017.
Hasil: Dari total 18 subjek, 44,4% memiliki infeksi HPV positif, 66,7% menunjukkan marker hipoksia positif. Hubungan infeksi HPV dan hipoksia dalam penelitian ini menunjukkan tidak ada hubungan yang signifikan (OR HPV = 2,0 (0,2-15,3), OR hipoksia positif = 0,6 (0,15-2,5), atau hipoksia negatif = 1,2 (0,6-2,3), p = 0,638). Dalam penelitian ini, enam pasien (33,3%) memiliki respon lengkap, tujuh pasien (38,8%) memiliki respon parsial, satu pasien memiliki respon stabil, dan empat pasien (22,2%) memiliki respon progresif terhadap radiasi. Tidak ada hubungan yang signifikan antara HPV + / hipoksia +, HPV + / hipoksia-, HPV- / hipoksia +, dan kelompok HPV- / hipoksia- terhadap tanggapan terapi (p = 0,514).
Kesimpulan: Peningkatan insiden HPV dan hipoksia tumor yang tinggi pada pasien dengan rongga mulut dan kanker orofaringeal. Namun, tidak ada efek signifikan dari HPV dan tumor hipoksia terhadap respons radiasi. Hipoksia berhubungan dengan respon progresif.
.....Background: Human Papilloma Virus (HPV) infection can lead to head and neck cancer and affect therapy outcomes. Hypoxic tumors are known to show poor therapy response in majority of malignancies, including Squamous Cell Carcinoma (SCC). This study aimed to show characteristics of HPV and hypoxia in oral cavity and oropharyngeal cancer and their association in radiation response.
Method: We conducted an experimental study on patients diagnosed with oral cavity cancer and oropharyngeal cancer who had undergone radiation therapy in Radiotherapy Department between January 2013 until December 2017.
Result: From a total of eighteen subjects, 44.4% had positive HPV infection, 66.7% had positive for hypoxia.. The association of HPV infection and hypoxia in this study showed no significant relationship (OR HPV = 2.0(0.2-15.3), OR positive hypoxia = 0.6(0.15-2.5), OR negative hypoxia = 1.2(0.6-2.3), p=0.638). In this study, six patients (33.3%) had complete response, seven patients (38.8%) had partial response, one patient (5.6%) had stable response and four patients (22.2%) were progressive respon to the radiation. There was also no statistically significant association between HPV+/hypoxia+, HPV+/hypoxia-, HPV-/hypoxia+, and HPV-/hypoxia- group against therapy responses (p=0.514). In this study all progressive response related with hypoxia status.
Conclusion: There were high incidences of HPV and tumor hypoxia in patients with oral cavity and

oropharyngeal cancer. However, there was no significant effects of HPV and tumor hypoxia to final radiation response. Hypoxia related to progressive disease.