Profil kadar sel treg, sel T CD4, dan CD8 pada kanker serviks, hubungannya dengan progresivitas tumor dan respons radiasi = Profile of foxp3, CD4, and CD8 level in cervical cancer, its impact to tumor progressivity and radiation response

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Abstrak

Tujuan. Penelitian ini bertujuan untuk mengetahui profil Treg (ditunjukkan oleh Foxp3), CD4, dan CD8 pada kanker serviks stadium lanjut lokal dan dampaknya terhadap progresivitas tumor dan respons radiasi. Metode. Setelah disetujui oleh komite penelitian, kami mengumpulkan data pasien kanker serviks stadium lanjut lokal yang menjalani radioterapi, di RSCM, Jakarta, pada Januari 2018 – Desember 2020. Subjek penelitian harus memiliki pencitraan pra dan paska radiasi dan spesimen blok parafin untuk memenuhi syarat dalam penelitian ini. Profil Foxp, CD4, dan CD8, akan dianalisis dengan imunohistokimia dengan penghitungan jumlah sel. Respons radiasi akan dianalisa dengan kriteria RECIST 1.1. Semua informasi klinis pasien yang diperlukan akan dikumpulkan dari rekam medis elektronik. Hasil. Kami menemukan bahwa sebagian besar pasien memiliki karsinoma sel skuamosa (93%), stadium IIIC (48%), dan menjalani radiasi saja (72%). Evaluasi RECIST menunjukkan 62% pasien memiliki respons lengkap, 28% respons parsial, dan 10% respons buruk (penyakit stabil dan progresif). Kami dapatkan median jumlah sel CD4 =29 (7 – 154), CD8 = 30 (6 – 227), dan Foxp3 = 36 (2 – 156). Tidak ada hubungan bermakna antara jumlah sel limfosit CD4, CD8, dan Foxp3 dengan volume tumor, dengan p = 0.858; p = 0.975, dan p = 0.723 masing masing. Tidak ada hubungan bermakna dengan dimensi terbesar tumor dengan p = 0.481, p = 0.480, dan p = 0.792 masing masing. Tidak ada pula hubungan bermakna antara jumlah sel limfosit CD4, CD8, dan Foxp3 dengan respons radiasi dengan p = 0.964, p = 0.296, dan p = 0.787 masing masing. Namun kami mendapatkan korelasi positif yang kuat dan bermakna pada jumlah sel tumor pada stroma, CD 4 - CD8 (r = 0.580, p=0.001); CD4 - Foxp3 (r = 0.699, p < 0.001), dan CD8 - Foxp3 (r = 0.652, p < 0.001). Kesimpulan. Sebagian besar pasien kanker stadium lanjut lokal yang menjalani radiasi memiliki respons lengkap. Tidak didapatkan hubungan bermakna antara jumlah sel limfosit CD4, CD8, dan Foxp3 dengan volume tumor, dimensi terbesar tumor, dan respons radiasi. Terdapat korelasi yang kuat dan signifikan antar sel imun (CD4-CD8, CD4-Foxp3, dan CD8-Foxp3) pada lingkungan stroma.

.....Aims: This study aims to determine profile of Treg (shown by Foxp3), CD4, and CD8 in locally advanced cervical cancer and the impact to tumor progressivity and radiation response. Method. After been approved by the institution research committee, we collect data of locally advanced of cervical cancer patients who underwent radiotherapy, at RSCM, Jakarta, in January 2018 – December 2020. Studies subjects must have pre and post irradiation imaging and paraffin block specimen to be eligible in this study. Profile of Foxp, CD4, and CD8, will be analyzed by immunohistochemistry, by counting the number of cells, and radiation response will be analyzed by RECIST 1.1 criteria. All necessary patient’s clinical information will be collected from electronic medical record. Result. We found that most of the patients had squamous cell carcinoma (93%), stage IIIC (48%), and underwent radiation alone (72%). RECIST evaluation showed 62% of patients had a complete response, 28% a partial response, and 10% had a poor response (stable and progressive disease). We found median CD4 cell counts = 29 (7 – 154), CD8 = 30 (6 –

227), and Foxp3 = 36 (2 – 156). There was no significant relationship between the number of CD4, CD8, and Foxp3 lymphocytes with tumor volume, with $p = 0.858$; $p = 0.975$, and $p = 0.723$ respectively. There was no significant relationship with the dimensions of the largest tumor with $p = 0.481$, $p = 0.480$, and $p = 0.792$, respectively. There was no significant relationship between the number of CD4, CD8, and Foxp3 lymphocytes with radiation response with $p = 0.964$, $p = 0.296$, and $p = 0.787$, respectively. However, we found a strong and significant positive correlation in the number of tumor cells in the stroma, CD4 - CD8 ($r = 0.580$, $p = 0.001$); CD4 - Foxp3 ($r = 0.699$, $p < 0.001$), and CD8 - Foxp3 ($r = 0.652$, $p < 0.001$). Conclusion. Most locally advanced cancer patients who undergo radiation have a complete response. There are no significant relationships between the number of CD4, CD8, and Foxp3 lymphocytes with tumor volume, largest tumor dimensions, and radiation response. There is a strong and significant correlation between immune cells (CD4-CD8, CD4-Foxp3, and CD8-Foxp3) in the stromal environment.