Hubungan antara ekspresi Foxp3 tumor infiltrating lymphocyte (TIL) dengan respons terapi kemoradiasi karsinoma nasofaring = Association between Foxp3 expression tumor infiltrating lymphocyte (TIL) in nasopharyngeal carcinoma with the response after chemoradiation.

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Abstrak

Latar Belakang: Karsinoma nasofaring (KNF) adalah karsinoma yang berasal dari epitel permukaan nasofaring dengan angka insidensi yang tinggi di Tiongkok dan Asia Selatan. KNF masih menjadi masalah kesehatan di Indonesia dan prognosisnya dilaporkan buruk terkait dengan penanganan yang sering tidak optimal karena kebanyakan (60-95%) pasien berobat dalam stadium lanjut. Saat ini berkembang penelitian terhadap tumor microenvironment yang dapat dinilai melalui tumor infiltrating lympochyte (TIL) yang berkaitan dengan respons terapi pada beberapa tumor, termasuk KNF. Beberapa penelitian menyebutkan bahwa TIL salah satunya dapat dinilai dengan Foxp3. Foxp3 diketahui sebagai penanda sel T regulator (Treg) yang turut berperan dalam immunoregulator lingkungan sel-sel tumor dan dapat digunakan sebagai salah satu faktor prognosis. Hubungan antara ekspresi Foxp3 dengan respons terapi dapat dipertimbangkan menjadi salah satu faktor yang mempengaruhi prognosis KNF.
Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan antara ekspresi Foxp3 dengan respons terapi karsinoma nasofaring.
Metode: Penelitian analitik dengan desain potong lintang pada sediaan KNF tidak berkeratin di Departemen Patologi Anatomik FKUI/RSCM selama periode Januari 2018 hingga Desember 2020. Pengambilan sampel penelitian dilakukan secara consecutive sampling dari kasus yang memenuhi kriteria inklusi dan eksklusi sesuai perhitungan besar sampel untuk masing-masing kelompok. Pemeriksaan imunohistokimia menggunakan antibodi primer monoklonal Foxp3. Data imunoekspresi dianalisis untuk mengetahui hubungannya dengan respons terapi karsinoma nasofaring.
Hasil: Dari 60 kasus yang terdiagnosis KNF, sebanyak 40 kasus (66,7%) berjenis kelamin laki-laki dan 20 kasus lainnya (33,3%) berjenis kelamin perempuan dengan rasio 2:1. Terdapat perbedaan bermakna ekspresi Foxp3 intratumoral dengan respons terapi (p=0,01). Tidak terdapat perbedaan bermakna ekspresi Foxp3 peritumoral dengan respons terapi (p=0,114).
Kesimpulan: Ekspresi Foxp3 mempunyai hubungan yang bermakna secara statistik dengan hasil evaluasi respons pasca kemoradiasi karsinoma nasofaring.
.....Background: Nasopharyngeal carcinoma (NPC) is a carcinoma originating from the surface epithelium of the nasopharynx with a high incidence in Tiongkok and South Asia. NPC still become main health issue in Indonesia and the prognosis is reported to be poor due to suboptimal treatment because most of the patients (60-95%) are treated at an advanced stage. Currently, many research are developing on the tumor microenvironment that can be assessed by tumor infiltrating lymphochyte (TIL) which is associated with the treatment response in several tumors, including NPC. Some studies explore that TIL can be assessed with Foxp3. Foxp3 is known as a regulatory T cell (Treg) marker that plays a role in the immunoregulator

environment of tumor cells and can be used as a prognostic factor. The relationship between Foxp3 expression and treatment response can be considered as one of the factors that influence the prognosis of NPC.
Aims: This study aims to determine the relationship between Foxp3 expression and treatment response of NPC.
Methods: An analytical study with a cross-sectional design on non-keratinizing NPC diagnosed at Anatomical Pathology Department of FKUI/RSCM during January 2018 until December 2020. The research sample was taken by consecutive sampling of cases that met the inclusion and did not include the exclusion criteria according to the calculation of the sample size for each group. Immunohistochemical examination using Foxp3 monoclonal antibody. Immunoexpression data were analyzed to determine its relationship with the treatment response of NPC.
Results: From 60 selected cases diagnosed with NPC, there were consisted of 40 male patients (66,7%) and 20 female patients (33,3%) with ratio 2:1. There was a significant difference in intratumoral Foxp3 expression with treatment response (p=0.01). There was no significant difference in peritumoral Foxp3 expression with treatment response (p=0.114).
Conclusion: Foxp3 expression had a statistically significant relationship with response therapy after chemoradiation.