

# Asupan protein, Prognostic Nutritional Index dan kualitas hidup pasien kanker kepala Leher yang menjalani radioterapi = Protein Intake, Prognostic Nutritional Index and Quality of Life in Head and Neck Cancer Patients Undergoing Radiotherapy

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## Abstrak

Kuantitas dan kualitas asupan protein belum sepenuhnya diketahui perannya terhadap kualitas hidup. *Prognostic Nutritional Index* (PNI) juga belum diketahui dapat mencerminkan kualitas hidup dan apakah bisa ditingkatkan dengan asupan protein. Penelitian dengan desain potong lintang ini bertujuan untuk mengetahui korelasi antara asupan protein dengan PNI dan kualitas hidup serta korelasi PNI dengan kualitas hidup pada pasien kanker kepala leher dengan radioterapi di Departemen Radioterapi Rumah Sakit dr. Cipto Mangunkusumo, Jakarta. Sebanyak 61 subjek didapatkan dari *consecutive sampling*. Rerata usia subjek adalah  $46,3 \pm 12,4$  dan 65,6% subjek berada pada kanker stadium IV dan mendapatkan terapi kemoradiasi. Sebanyak 32,8% subjek yang memiliki status gizi kurang. Median asupan protein adalah 1,42 (0,26-4,11) g/kg/hari. Nilai PNI pada subjek penelitian memiliki median 45,9 (29,4-54,2). Hasil penelitian menunjukkan adanya korelasi bermakna antara kuantitas asupan protein berdasarkan *Food Frequency Questionnaire* (FFQ) semikuantitatif dan beberapa aspek gejala pada kualitas hidup yaitu pada aspek *pain (head and neck)* ( $r=-0,32$ ;  $p=0,01$ ), *swallowing* ( $r=-0,37$ ;  $p=0,004$ ), *social eating* ( $r=-0,29$ ;  $p=0,02$ ), *dry mouth* ( $r=-0,41$ ;  $p=0,001$ ), *sticky saliva* ( $r=-0,32$ ;  $p=0,01$ ), *fatigue* ( $r=-0,28$ ;  $p=0,03$ ), *nausea and vomiting* ( $r=-0,26$ ;  $p=0,04$ ) dan *appetite loss* ( $r=-0,3$ ;  $p=0,01$ ). Kualitas asupan protein tidak berkorelasi bermakna dengan kualitas hidup. PNI berkorelasi bermakna terhadap 1 aspek fungsional yaitu *physical function* ( $r=0,378$ ;  $p=0,003$ ) dan 2 aspek gejala yaitu *opening mouth* ( $r=-0,325$ ;  $p=0,01$ ) dan *dyspnea* ( $r=-0,257$ ;  $p=0,045$ ). Meskipun tidak signifikan secara statistik, namun PNI memiliki arah korelasi yang positif terhadap aspek fungsional lainnya dan memiliki arah korelasi negatif terhadap aspek gejala lainnya yang berarti semakin tinggi PNI maka aspek fungsional semakin baik dan gejala semakin ringan. Studi ini tidak menemukan adanya korelasi bermakna antara asupan protein, baik kualitas maupun kuantitasnya, terhadap PNI. Hasil ini diduga berkaitan dengan penemuan bahwa sebagian besar penderita masih memiliki pola asupan yang mampu mencukupi kebutuhan kalori dan protein harian. Diperlukan studi prospektif yang menelusuri aspek prognostik kanker kepala leher dari segi kualitas hidup untuk mengetahui apakah PNI dapat memprediksi aspek kualitas hidup dengan lebih rinci.

.....Quality and quantity of protein intake has not been well understood that it can affect quality of life. Moreover, Prognostic Nutritional Index (PNI) also has not been well studied upon its usage to reflect quality of life of head and neck cancer patients undergoing radiotherapy. This cross sectional study was aimed to determine the correlation between protein intake and PNI and also the correlation between PNI and quality of life in head and neck cancer patients undergoing radiotherapy at Radiotherapy Department, dr. Cipto Mangunkusumo General Hospital, Jakarta. Total of 61 subjects were recruited with consecutive sampling method with mean age of  $46,3 \pm 12,4$  years old and 65,6% subjects were on stage IV cancer and were getting a combination of chemo and radiotherapy. Only 32,8% subjects were on low nutritional status.

Median of total protein intake was 1,42 (0,26-4,11) g/kg/day. Median of PNI was 45,9 (29,4-54,2) among subjects. The result of the study showed a significant correlations between quantity of protein intake based on semiquantitative Food Frequency Questionnaire (FFQ) with several aspects of quality of life, that were <em>pain (head and neck) </em>(r=-0,32; p=0,01)<em>, swallowing </em>(r=-0,37; p=0,004), <em>social eating </em>(r=-0,29; p=0,02), <em>dry mouth </em>(r=-0,41; p=0,001), <em>sticky saliva </em>(r=-0,32; p=0,01), <em>fatigue </em>(r=-0,28; p=0,03), <em>nausea and vomiting </em>(r=-0,26; p=0,04) dan <em>appetite loss </em>(r=-0,3; p=0,01). This aspects were all symptomatics. PNI was significantly correlated with 1 functional aspect, which was <em>Physical function</em> (r=0.378; p=0,003) and 2 symptomp aspects, which were <em>opening mouth </em>(r=-0,325; p=0,01) dan <em>dyspnea </em>(r=-0,257; p=0,045). Although not statistically significant, but there were positive direction of correlation with other functional aspects and negative direction of correlation with other symptomp aspects. This implicates that the higher the PNI, the lower the symptoms and the better the functional status of head and neck cancer patients undergoing radiotherapy. This study did not show a significant correlation between quality and quantity of protein intake with PNI. An adequate intake of calorie and protein in most subjects were found in this study which might explain the result. More studies, preferably prospective one, may be needed to show the usage of PNI to reflect quality of life, especially involving quality of life progresivity.