

肝癌患者接受立體定位放射線治療期間疲倦及血液數值變化之探討

Evaluation of the changes of fatigue and hematology index level in hepatocellular cancer patients receiving stereotactic radiation therapy.

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摘要

目的：在台灣，肝癌是常見的惡性腫瘤，近年來立體定位放射線治療是治療肝癌的新方式之一。對於治療期間病患所出現的疲倦問題，目前尚未有研究探討，因此本研究主要探討肝癌患者在接受肝臟腫瘤立體定位放射線治療期間所產生的疲倦程度及血液數值之變化。材料與方法：本研究採前瞻性縱貫式研究設計，於北市二所教學醫院取樣收案，收案時間自民國 90 年 12 月至 91 年 5 月間，共收集 45 位符合條件之肝癌患者為收案對象，其中 5 位患者分別因死亡或中途退出而中止訪談，故完成連續七週研究者共計 40 名；每週以疲倦症狀量表進行疲倦強度、持續時間及對生活干擾程度之測量。血液數值方面每週進行 Hb、Ht、WBC 及 Platelet 之檢驗，共計七次；此外分別於放射治療前一週、放射治療中第二、四及第六週來追蹤 AST、ALT 及 Albumin 之變化。統計方法以 SPSS 套裝軟體進行資料分析。結果：所有研究對象於立體定位放射治療前即存在疲倦現象，除第三週略為改善外，疲倦程度於第五週達高峰，第六週便改善 ($p < 0.01$)，但整個治療期間疲倦程度仍屬輕度範圍。研究對象於治療前一週的血液學數值除 Ht 偏低外，其他數值皆在正常範圍內，但經放射治療後，Hb、Ht、WBC、platelet 隨放射治療而逐漸下降 ($p < 0.05$)，且皆低於正常值。此外，治療前患者之 AST、ALT 數值皆高，且隨治療療程而持續升高，於第六週達高峰；Albumin 數值則隨放射治療療程而逐漸下降 ($p < 0.01$)，但治療前後均處於正常範圍內。而疲倦程度的高低與血液數值 (WBC、Platelet、AST、ALT 及 Albumin) 之間並無顯著相關 ($p > 0.05$)。結論：雖然疲倦是肝癌患者於接受立體定位放射線治療期間常

見的問題，但所呈現的程度屬輕度範圍，而血液中代表肝功能之生化數值會隨治療程部分有改變。本研究結果可提供臨床醫療人員在照護此類病患時有更多的參考訊息，適時提供相關醫護處置，以協助病患渡過不適的階段。

Abstract

Purpose : Hepatocellular carcinoma is a common malignancy in Taiwan. Recently, stereotactic radiotherapy is one of the new treatment modality for this disease. However, there still do not have study focused on the changes of fatigue level in patients receiving this treatment. The purpose of this study was to evaluate the changes of fatigue and hematology index in hepatocellular cancer patients receiving stereotactic radiotherapy.

Materials and methods : Prospective longitudinal research design was developed to examine the changes of fatigue and hematology index during and after stereotactic radiotherapy. Data were collected from December 2001 to May 2002. A total of 45 eligible subjects were recruited from two teaching hospitals in Taipei. Five patients were excluded due to expire or dropout from this study. Forty eligible patients finished the seven weeks study. Fatigues index were evaluated by questionnaire of Fatigue Symptom Inventory (FSI) which measured the fatigue intensity, fatigue duration and fatigue interference weekly. Hb, Ht, WBC and Platelet were measured weekly for 7 weeks. Besides, AST, ALT and albumin blood index were measured one week before radiation therapy and at week 2, week 4 and week 6 during treatment. Data were analyzed by SPSS computer program.

Results : All the subjects in this study had mild fatigue in the beginning of the treatment. Their fatigue intensity, fatigue duration and fatigue interference were significantly increased from pre-treatment to the 5th week except the 3rd week. The peak level of fatigue occurred in the 5th week and it decreased since the 6th week ($p < 0.01$). Blood Hb, Ht, WBC and platelet level descended gradually to abnormal along with treatment ($p < 0.05$), but the blood AST and ALT level rise along with the treatment. Though the blood albumin level decreased, it was in normal range. Nonsignificant correlations between fatigue level and laboratory data were found.

Conclusion : Fatigue was a commonly experienced problem in hepatocellular cancer patients receiving stereotactic radiotherapy, but the fatigue scores were at minimal level. Part of the hematology study data change during treatment. The results of this study can provide the clinical personnel information about the change of fatigue level in hepatocellular cancer patients receiving stereotactic radiotherapy