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The effect of hoemodialysis on pulmonary function tests and respiratory symptoms in patients with chronic renal failure

Hekmat, R.[a], Boskabady, M.H.[b], Khajavi, A.[b], Nazary, A.[b]

[a] Dept. of Internal Medicine, Ghaem Medical Centre, Mashahd University of Medical Sciences, Mashhad, Iran

[b] Department of Physiology, Ghaem Medical Centre, Mashhad University of Medical Sciences, Mashhad, Iran

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Abstract

Objective: In the present study the effect of hemodialysis on pulmonary function tests (PFT) and respiratory symptoms of CRF (Chronic Renal Failure) patients was studied. Methodology: Respiratory symptoms of 18 CRF patients were recorded using a questionnaire, before, in the middle and the end of dialysis. PFT values of patients were also measured in three phases. In addition, baseline PFT values and respiratory symptoms of CRF patients (PFT values and respiratory symptoms before dialysis) were compared with the data of a matched control group of normal subjects (n=18). Results: Most respiratory symptoms in CRF patients (cough, sputum and breathless) were significantly more prevalent, than control group ($p<0.005$ to $p<0.001$). The values of forced vital capacity (FVC), forced expiratory volume in one second (FEV_1), peak expiratory flow (PEF), maximal mid expiratory flow (MMEF) and maximal expiratory flow at 75%, 50%, and 25% of the FVC (MEF_{75}, MEF_{50}, and MEF $_{25}$ respectively) in CRF patients were also significantly lower than control group ($p<0.001$ for all cases). Most respiratory symptoms of CRF patients at the middle and the end of dialysis were significantly lower than the beginning of dialysis. ($p<0.05$ to $P<0.001$). In addition, some respiratory symptoms were also significantly improved at the end compared to the middle of dialysis ($p<0.05$ for all cases). However, the dialysis did no effect PFT values in CRF patients. Conclusion: The results of this study showed that dialysis in CRF patients can improve the respiratory symptoms but has no effect on PFT values.

Reaxys Database Information

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Author keywords

Chronic renal failure; Hemodialysis; Pulmonary function tests; Respiratory symptoms

Indexed Keywords

EMTREE medical terms: adult; article; chronic kidney failure; clinical article; controlled study; coughing; dyspnea; female; forced expiratory volume; hemodialysis; hemodialysis patient; human; lung function test; male; peak expiratory flow; prevalence; questionnaire; respiratory tract disease; sputum; symptom

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