

**Abstract Submission No.: A-0399****Effects of A Single Session of Hemodialysis On Lung Function In Chronic Hemodialysis Patients**

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**Objectives :** Lung is one of the organs affected by various disturbances that occur in patients with End Stage Renal Disease (ESRD) undergoing chronic hemodialysis (HD), so lung function is important to be evaluated. Various studies suggest single session of HD can increase lung function. The aim of this study was to investigate changes in lung function after single session of HD in ESRD patients, using spirometry.

**Methods :** Observational, cross sectional study. All patients of aged 19-77, on regular hemodialysis (HD) for more than three months, had no history of obstructive pulmonary disease and stable condition. Demographic data collected and pulmonary function measured were Forced Vital Capacity (FVC) and Forced Expiratory Volume in first second (FEV1) and FVC/FEV1 before and after single session of HD.

**Results :** A total of 57 patients, 32 (56.1%) males and 25 (43.9%) females were on third-weekly dialysis. There were 18 (31.6%) patients with a history of smoking and 39 (68.4%) patients who did not. The average HD adequacy of Kt/V patients was  $1.4 \pm 0.75$ . There were 48 patients (84.2%) with the outcome of restrictive pulmonary disease and 9 patients (15.8%) with normal lung function. The average FVC of the total patient was  $34.76 \pm 19.55$  predicted value, where this numbers increased to  $36.17 \pm 17.92$  predicted value after single HD session, but this increase was not statistically significant ( $p=0.886$ ). The average total FEV1 of the patient was  $38.52 \pm 20.90$  predicted value, where the figure increases to  $40.69 \pm 18.81\%$  predicted value after single session of HD, however this increase is not statistically significant ( $p=0.687$ ).

**Conclusions :** Most ESRD patients on chronic HD suffer from restrictive pulmonary disease. Single session of HD does not improve lung function.

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Variable	Mean (SD)	Min-Max (Median)
Age	47.08 (14.1)	19 -77 (48)
Sex (M/F)	32 (56.1) / 25 (43.9)	
Smoking (Y/N)	18 (31.6) / 39 (68.4)	
Kt/V	1.4 (0.75)	0.39-3.22 (1.5)

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Variable	Pre-HD (n=57)		Post-HD (n=57)		P
	Mean (SD)	Min-Max (Median)	Mean (SD)	Min-Max (Median)	
FVC	1.13 (0.64)	0 - 2.81 (1.11)	1.19 (0.68)	0 - 2.79 (1.17)	0.381*
FVC (%)	34.76 (19.55)	0 - 80.18 (36.46)	36.17 (17.92)	0 - 80.54 (36.81)	0.886*
FEV	1.11 (0.56)	0 - 2.23 (1.13)	1.11 (0.59)	0 - 2.46 (1.13)	0.975*
FEV (%)	38.52 (20.90)	0 - 95.97 (40.9)	40.69 (18.80)	0 - 95.91 (41.89)	0.687*
FEV1/FCV	94.31 (7.68)	72.73 - 100 (99.23)	92.09 (19.66)	0 - 100 (99.33)	0.693*
FEV1/FCV (%)	112.05(29.67)	0 - 133.57 (120.48)	115.63 (26.61)	0 - 132.72 (123.56)	0.183*