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Title: Six minute walking test in chronic respiratory failure: Which reflects the patient clinic status, walking distance or %predicted value?

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Body: AIM: Six minute walking test(6MWT) values are limited for the patients who has been prescribed noninvasive mechanical ventilator due to chronic respiratory failure (CRF). We aimed to answer either walking distance(WD) or % predicted value better reflects the respiratory function of the patients who use home mechanical ventilators(HMV) due to CRF. METHODS: 6MWT is performed in patients during June-December 2011 who were already using HMW due to CRF and followed in our polyclinic.WD,ideal and lower limit of normal WD according to gender,age,BMI and %predicted of ideal values were calculated. Parameters that recorded during standart 6MWT and %predicted values were compared according to arterial blood gas(ABG),spirometry values and concomitant diseases. RESULTS: Correlation of WD and %predicted values for spirometry and ABG values of 144 patients were shown in Table 1.

Table 1

	6MWT, meter		6MWT, % predicted value	
	r	p	r	p
FEV1,ml	0.29	0.001	0.44	0.001
FEV1 % predicted	0.05	0.60	0.45	0.001
FVC,ml	0.20	0.027	0.26	0.003
FVC % predicted	-0.04	0.63	0.30	0.001
FEV1/FVC	0.12	0.21	0.26	0.004
PaCO2	-0.12	0.16	-0.26	0.002
PaO2/FiO2	0.40	0.001	0.36	0.001

Patients diagnoses were grouped as COPD,OHS,kyphoscoliosis and parenchymal lung diseases and their 6MWT were compared in Table 2.

Table 2

	COPD,38	OHS,52	Kyphoscoliosis,23	PAH,31	p
6MWT,m	316(226-390)	303(240-362)	420(318-462)	333(273-372)	0.002
6MWT % predicted	59(43-69)	73(63-82)	71(56-75)	67(47-75)	0.001
Ideal 6MWT,m	527(489-585)	408(353-491)	605(566-692)	491(450-590)	0.001
Lower limit normal	374(336-432)	262(210-338)	452(413-539)	348(301-437)	0.001

CONCLUSION: Predicted % values of 6MWT are better correlated with respiratory functions than WD for patients who use HMV due to CRF.