

MUSCLE THICKNESS OF THE RECTUS FEMORIS IS LOWER IN PATIENTS WITH COPD THAN IN HEALTHY PATIENTS MATCHED FOR SEX, AGE AND STATURE: AN EXPLORATORY STUDY

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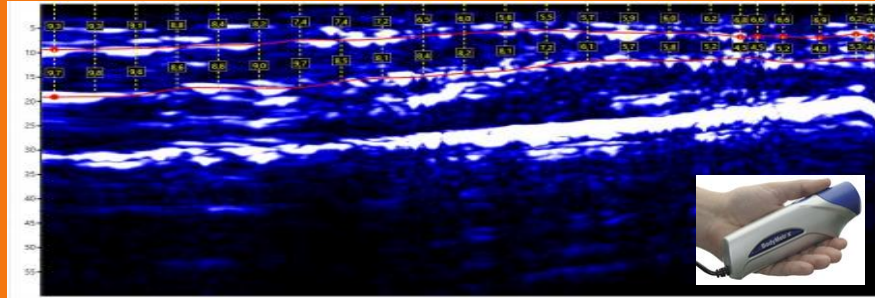


Figure 1: Image of m Rectus Femoris with BodyMetric

Conclusion

In a limited sample of patients with advanced COPD, m Rectus Femoris (RF) thickness was significantly lower than in healthy controls, whereas BMI was not.



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Table 1: Characteristics of COPD cases and healthy controls

Cases n=21*	Controls n=84
Age 64.5±6.4y	Age 64.5±6.4y
Female 62%	Female 62%;
Height 1.68±0.07m	Height 1.71±0.09 m
BMI 26.9±6.1 kg/m ²	BMI 25.8±4.5 kg/m ²
RF 12.4±3.4mm	RF 14.6±4.5mm
Age 64.5±6.4y	Age 64.5±6.4y

Table 2: results of paired sample t-tests for difference in BMI and RF thickness in COPD cases and healthy controls

	P-value	Mean diff	95% CI
BMI (kg/m ²)	0.526	0.95	-2.12 – 4.01
RF (mm)	0.003*	-2.33	-3.73 – -0.92

REFERENCE

Nijholt W, Beek L ter, Hobbelen JSM, van der Vaart H, Wempe JB, van der Schans CP, et al. The added value of ultrasound muscle measurements in patients with COPD: An exploratory study. Clin Nutr ESPEN 2019;30:152–8

AIM

We explored body mass index (BMI) and rectus femoris (RF) muscle thickness in patients with advanced COPD matched with healthy controls.

METHODS

- COPD patients starting a pulmonary rehabilitation program were matched with healthy controls for age (5 years), sex and stature (0.10 m) in a case control ratio of 1:4
- Height was measured with a stadiometer and weight was measured with a scale and Muscle thickness (mm) of the RF was measured with a BodyMetric ultrasound device
- Paired sample t-tests were performed
- BMI and RF muscle thickness of the cases were paired with the average BMI and RF of their controls
- A p-level of <0.05 was considered significant; 95% CIs were calculated

RESULTS

- 21 patients with COPD and 84 healthy controls were included
- BMI was not significantly different between cases and controls (p=0.526, mean difference 0.95 kg/m² [CI:-2.12 – 4.01])
- RF muscle thickness of cases was significantly lower in cases (p=0.003*, mean difference -2.33 mm [CI:-3.73 -- 0.92])