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Study for a Non-Invasive Method of Respiratory Resistance Measurement among Patients with Airways Obstructions

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Abstract : Distances between signals (S d) and between asters (A d) calculated from respiratory inductive plethysmography signals has been used in order to evaluation airways resistances (Raw) during reversibility test among 28 subject with airways obstructions. Correlations studies between these distances and Raw measured by body plethysmography (BP) showed that these RIP variables could be potentially used in airway resistance assessment in patients with airway obstruction. Significant correlation was found between ΔAd and airway resistance changes (ΔRaw) (r= 0.407, p=0.03) and not between ΔSd and ΔRaw. This assumption was supported by the high correlations found when relating the average of ΔS and of ΔA calculated on successive intervals of ΔRaw, with the ΔRaw averages calculated for each interval (r= 0.892, p= 0.006 and r= 0.857, p=0.006 respectively).

Keywords : airways obstruction, distances, respiratory inductive plethysmography, reversibility test
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