# Resumo

Recent studies have shown that the fluid shift from the leg to the neck when the subject assumes the supine position contributes to upper airway collapsibility during sleep. However, the dependence of different postures in fluid has not been completely elucidated. We hypothesized that posture (supine vs sitting position) will have opposite effects on fluid shift displacement. Methods This was a cross over study in which 18 healthy male subjects remained still for 60 minutes at the supine or seated position. The experiments in the 2 postures were done in different days and the sequence was randomized. Segmental bioimpedance (InBody S10, Biospace), cervical, abdomen and calves circumferences and were measured at time 0 and 60 minutes. Results The subjects were characterized by: age and body mass index  $24.09 \pm 2.57 \text{ kg/m}^2$ . Baseline parameters were similar in supine position at the beginning of the study in both positions and were: cervical circumference  $38.46 \pm 1.45$  cm, right calf circumference  $38.20 \pm 2.32$  left calf circumference  $38.27 \pm 2.10$ . Changes in leg segmental water in the supine position vs sitting position were significantly different (change: left leg: decrease of  $127 \text{ ml} \pm 0.164$  in supine vs increase of  $144 \text{ ml} \pm 0.300$  in seated position (p=0.03). Right leg: decrease of 159 ml  $\pm$  0.154 in supine vs increase of 52 ml + 0.110 in seated position (p=0.03). Right calf circumference raised  $0.60 \text{ cm} \pm 0.33$  in seated position while decreased 0.57 cm  $\pm$  0.51. Left calf raised 143 ml  $\pm$  0.269 vs decreased  $127 \text{ ml} \pm 0.269$ (p=0.03). Cervical circumference  $0.54~\text{cm} \pm 0.57~\text{and}$  reduced  $0.60~\text{cm} \pm 60$  in the supine position (p < 0.0001). Conclusion Human body is subjected to significant posture dependent fluid shift. One hour at the sitting position is sufficient for a significant liquid accumulation in the legs with a decrease in neck circumference.

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# THE NEW TOOL TO SCREENING OBSTRUCTIVE SLEEP APNOEA: NEGATIVE EXPIRATORY PRESSURE TEST

Luis V.F. Oliveira, Nina T Fonseca, Sergio R Nacif, Raquel Pastrelo Hirata, Jéssica J. Urbano, Salvatore Romano, Giuseppe Insalaco

UNIVERSIDADE NOVE DE JULHO-UNINOVE E-mail address: jjulioti@yahoo.com.br (J.J. Urbano)

#### Resumo

Introduction and objective

The negative expiratory pressure (NEP) test is proposed to assess upper airway collapsibility in patients with obstructive sleep apnea (OSA). Expiratory flow limitation (EFL) has been described as a transient or sustained decrease in expiratory flow during the application of the NEP test. The aim of this study was to describe the application of a new NEP method for assessing EFL during spontaneous breathing to identify patients at risk for OSA.

#### Methods

Upper airway collapsibility was evaluated by measuring decreases in flow and expired volume during the first 0.2 s after the application of NEP at 10 cmH2O. The NEP test was easily applied to evaluate EFL caused by upper airway obstruction in patients with OSA.

#### Results

The NEP is a method for detecting upper airway flow limitation and has been used worldwide over the past 2 decades. Authors have applied the NEP in a number of different subjects including healthy individuals, patients with chronic obstructive pulmonary disease, obese individuals, and those with sleep disorders such as OSA, to detect airflow limitation.

#### Conclusion

A number of studies have been performed in different populations and have shown that NEP is a reliable method for detecting upper airway collapsibility and can be used as a screening method for diagnosing moderate to severe OSA.

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## TRATAMENTO CIRÚRGICO DE BENEFÍCIO ANTECIPADO DA SÍNDROME DA APNEIA OBSTRUTIVA DO SONO: RELATO DE CASO

Christiane Cavalcante Feitoza, Corintho Viana Pereira, Janaína Medeiros Teixeira Emery, Pedro de Lemos Menezes, Paula Fernanda Damasceno Silva

UNIVERSIDADE FEDERAL DE ALAGOAS
E-mail address: chris\_tianeodo@hotmail.com (C.C. Feitoza)

### Resumo

A Síndrome da Apneia Obstrutiva do Sono (SAOS) é uma doença crônica, evolutiva e com graves repercussões sistêmicas. Apresenta fatores predisponentes como obesidade, variações no tônus muscular, alterações anatômicas do esqueleto facial e dos tecidos moles que circundam a faringe. Os sintomas evidenciados como o sono excessivo diurno, falta de concentração, impotência sexual, disritmias noturnas, dores de cabeça matinais e depressão estão entre os mais relatados, sendo a polissonografia, o exame mais eficaz para diagnosticar a severidade da síndrome e dessa forma, auxiliar com segurança no planejamento do tratamento que tem como objetivo devolver a saúde, o bem-estar e a qualidade de vida ao indivíduo. A terapêutica da SAOS tem caráter multidisciplinar e engloba desde medidas clínicas até cirúrgicas, fazendo-se necessária a participação do cirurgião-dentista em ambas as esferas. Diante da alta morbidade e mortalidade, nos casos com indicação cirúrgica, a opção de escolha "Surgery First" ou "Benefício antecipado" de avanço bimaxilar deve ser considerada sempre que a má oclusão inicial não comprometa a estabilidade da técnica cirúrgica. No caso clínico apresentado, o paciente era portador de SAOS