INTRODUCTION
Obstructive Sleep Apnea Syndrome (OSAS) is a chronic disease characterized by repeated episodes of collapse of the upper airway with sleep fragmentation. It is directly related to arterial hypertension, cardiovascular diseases, excessive daytime sleepiness, and a decrease in the quality of life.1 Several conservative and surgical treatment strategies for the management of OSAS have been studied for the last two decades. Fujita 2 was the first author to describe the technique of uvulopalatopharyngoplasty (UPPP) as a technique to treat the upper airway collapse that occurred in OSAS. This surgery has presented modifications and improvements. Pang and Woodson 3 developed a technique variation of UPPP named Expansion Sphincter Pharyngoplasty (ESP). The concept of the technique is to isolate the palatopharyngeal muscle and rotate it superanterolaterally. After that, be able to create a lateral wall tension and remove the bulk of the lateral pharyngeal wall.

The objectives of this study are to determine the effectiveness of ESP in the treatment of OSAS, to analyze the effects of ESP on the sleep stages of OSAS patients, and to analyze the changes in oxygen saturation after surgery.

METHODS AND MATERIALS
A retrospective study was carried out in a large private medical institution, from April 2010 to January 2014, with patients reporting symptoms suggestive of OSAS. After reviewing medical records, 20 patients were selected. All of them had a full night polysomnography ( PSG) with an Apnea hypopnea index (AHI) greater than 5 events/hour and were submitted to ESP to treat OSAS. Patients studied were adults with small tonsils, body mass index less than 30 kg/m², Friedman clinical stage II or III and type I Fujita. Charts between 2010 to 2014 were reviewed and preoperative and postoperative PSG results were analyzed.

Results: Eighteen patients (90%) undergoing ESP showed some improvement. The surgery was effective in the treatment of severe and moderate OSAS (p < 0.001). Patients with severe OSAS had better results with ESP than those with moderate OSAS. After surgery there were significant changes in sleep stages (p<0.05). Minimum oxygen saturation improved in the moderate and severe OSAS groups.

Conclusion: ESP is a valid therapeutic option for the treatment of OSAS, and, showed better results in severe cases rather than moderate ones. There are variations in the sleep stages that must be considered after this surgery. The surgical technique can bring benefits in oxygen saturation in patients with OSAS.

DISCUSSION
Pang and Woodson in their first description of the technique showed an improvement in the AHI from 44.2 ± 10.2 to 12.6 ± 6.6 events/hour (p=0.005), with a mean change of 32.2 ± 8.4. The lowest oxygen saturation increased from 87.4 ± 8% to 85.2 ± 5% (p=0.03) Vicini et al performed ESP nonrobotic with nasal surgery and, if required, tongue base reduction and supraglotoplasty in 12 patients. The preoperative AHI was 38.5 ± 14.3 and the average postoperative AHI was 5.8 ± 10 events/hour. In our study, we had the same good results.

There were no significant complications intra and postoperatively such as bleeding or nasopharyngeal obstruction. There was no significant increase in the EDS in patients with ESP that underwent improvement related to age or BMI (p = 0.12 and 0.45, respectively). There were no significant differences regarding postoperative improvement according to the severity of OSAS preoperatively (p = 0.145).

No significant difference was found between the two groups (p = 0.09) regarding improvement in the percentage of N3 sleep stage (p = 0.02). The medium and the minimum oxygen saturation also improved (p=0.01 and p<0.001) (Table I).

CONCLUSIONS
ESP is a valid therapeutic option for OSAS and should be considered in moderate and severe selected cases. It can reduce the AHI, improve the oxygen desaturation and even ameliorate the sleep architecture. Patients should be submitted to a detailed physical examination in order to analyze the obstruction areas of the upper airway to indicate this palatal procedure. One important tool for avoiding the harms caused by OSAS may be right in front of us.

REFERENCES