I. INTRODUCTION

Impacted mandibular third molars extraction is one of the most frequent and delicate surgery that the dentist is faced in clinical practice. Minimize post-operative, not interfering with the quality of life of patients is the major objective of the surgeon. Thus, ultrasonic surgery comes up as an alternative to osteotomy with conventional rotary instruments.

III. MATERIALS AND METHODS

Sample Characterization:
- Gender;
- Age;
- Homogeneity of groups.

Surgical Difficulty vs Surgical Time
- Chi-square test by Monte Carlo simulation.

Pain, Swelling, Trismus and Operative Bleeding
- Repeated measures ANOVA test.

IV. RESULTS

Table 1: Statistical Analysis

Statistical tests:
- Student’s t test for independent sample; Fisher test.

Surgical Difficulty = Full & Gregory
- The surgical time does not depend on the degree of inclusion or angulation of IIM in both surgical techniques.

Pain vs Surgical Technique
- According to the meta-analyses of Al-Morsali et al. (2016) and Jiang et al. (2015), the surgical time of ultrasonic surgery is significantly lower than that of conventional surgery.

Swelling vs Surgical Technique
- According to the meta-analyses of Al-Morsali et al. (2016), pain levels are significantly lower in ultrasound surgery.

Trismus vs Surgical Technique
- According to Al-Morsali et al. (2016) and Jiang et al. (2015), ultrasonic surgery causes lower trismus, presenting statistical significance in the meta-analysis of Al-Morsali et al. (2016).

Operative Bleeding vs Surgical Technique
- According to Stellone et al. (2013), operative bleeding is lower in ultrasonic surgery, however without statistically significant differences.

V. DISCUSSION

Surgical Difficulty vs Surgical Time vs Surgical Technique

Primary Objective
- Compare post-operative pain in extraction of impacted mandibular third molars using two surgical techniques: Ultrasonic Surgery or Conventional Surgery.

Secondary Objectives
- Evaluate the influence of surgical difficulty in the operative time, according the applied technique.
- Compare swelling, trismus, paresthesia and operative bleeding in the two surgical techniques.

VI. CONCLUSIONS

1. Ultrasonic surgery tends to be advantageous for post-operative signs and symptoms (pain, swelling, trismus), although these differences are not statistically significant.
2. The greater the surgical difficulty, the longer the operative time, regardless of the applied technique.
3. Ultrasonic surgery is more time-consuming technique, but it has favorable post-operative results.
4. Operative bleeding is significantly lower with ultrasonic technique, given that the surgical intervention is less invasive it represents a systemic advantage for the patient.

VII. CLINICAL IMPLICATIONS

Despite longer operative time and high equipment costs, the inherent advantages of the technique make its clinical applicability beneficial, especially in cases where maintenance of the integrity of the noble anatomic structures is the most relevant risk factor.

REFERENCES