

Monobloc Total Thyroidectomy Using Sealing Devices: Preliminary Results and Comparative Analysis

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Abstract

Background: The desire for perfect haemostasis has led the medical equipment industry to produce “ideal” instruments for safe thyroidectomy. Thus, haemostasis and sealing instruments such as the LigaSure™ Small Jaw, Thunderbeat™ Open Fine Jaw and Harmonic™ Focus have been indicated for thyroid surgery.

Aim: The purpose of this study is to present the initial results of using these three surgical instruments for performing monobloc thyroidectomy.

Material and Methods: We performed a prospective study between January 2014 and July 2019 in which we included all the patients operated by same surgeon using those 3 sealing devices. Thyroidectomies were performed using LigaSure™ Small Jaw (group 1), the Thunderbeat™ Open Fine Jaw (group 2) and Harmonic™ Focus (group 3). The groups were statistically compared in term of duration of surgery and hospitalisation, early postoperative complications as well as voice alteration or acute respiratory failure.

Results: No significant differences were observed among groups in terms of patient demographics, pathological diagnoses, postoperative complications, length of hospitalization, and clinical outcomes. Operating time was shorter in group 1.

Conclusions: New surgical instruments have beneficial properties, including shortening the operative time, maintaining a clean operating field, and minimising smoke released during the operation.

Key words: Thyroidectomy, LigaSure™ Small Jaw, Thunderbeat™ Open Fine Jaw, Harmonic™ Focus