

Harmonic Scalpel Versus Bipolar Diathermy in Trans -areolar Thyroidectomy

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ABSTRACT

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**Background:** Years ago the LigaSure device and Harmonic scalpel were tried in thyroid surgery. It was found to be superior to hand-tying techniques. The aim was to assess bipolar diathermy against harmonic scalpel regarding operation time, cost and complications. Videoscopic neck surgery is developing despite the fact that only potential spaces exist in the neck. These approaches are more appealing since the size of the incision of the conventional approach seems to be out of proportion compared to the small size of the tumours.

**Purpose:** to assess the applicability of bipolar diathermy in transareolar thyroidectomy. **Patients and Methods:** The interventions were led at Beni-suef University Hospital between January 2017 and December 2017, after the patients fitted both the inclusions and exclusions criteria. This study enrolled 30 co-operative patients aged 18-60 years with unilateral thyroid lobe nodule, nodules or diffused swelling with the largest diameter less than 4 cm. A total of 30 patients went with the transareolar thyroid lobectomy, 20 went with the harmonic scalpel and 10 with the bipolar diathermy. Thyroid nodules were less than 4-cm in their largest transverse diameter. Thyroid gland volume was less than 20-ml as estimated by US. Cranio-caudal axis of the lobes must not exceed 7-cm.

**Results:** Mean operating time was 90 min (57 -135) with the harmonic scalpel while it was 105 min (70-145) minutes. No significant post-operative bleeding was seen in both groups. LOS was same in both groups. Marked reduction in the cost was reported. **Conclusion:** Transareolar thyroidectomy with bipolar diathermy is associated with a marked reduction in cost compared to transareolar thyroidectomy with harmonic and this worth the long operating time.