In thyroid surgery, there is an additional reason to use it in near or subtotal thyroidectomy [2]. Petrakis *et al* [11] in a retrospective case-control study reported fewer complications and shorter operative and hospitalization times in ligasure group. Other retrospective and prospective but not randomized studies did not find any differences between complication rates and hospitalization times [2,3,10]). Operative time was substantially reduced in studies by Kirdak and Shen *et al* [2,3] but not by Kiriakopoulos *et al* [12]. In our study, the use of ligasure technique was safe, less time consuming, less hospital stay and less post-operative complications in comparison with clamp and tie technique.

The complication rate in our study was 7% in ligasure group (hyperthyroid) and 2.7% (euthyroid). In our study, 2.2% of patients in ligasure group and 9% of patients in the clamp and tie technique group had transient complications involving recurrent laryngeal nerves, and 6.6% of patients in ligasure group and 9% of patients in clamp and tie group had temporary hypoparathyroidism. Harold *et al* [13] and Kahky *et al* [14] had reported that temporary hypoparathyroidism may be noted in 13.4% of patients when only clinical symptoms are considered. In study of Delbridge *et al* [15] in 20% of patients who underwent near total thyroidectomy required calcium supplementation for 3-6 weeks after surgery. Transient recurrent nerve paralysis has been observed in 8.7% to 39% of patients [16,17] and is not completely avoidable even with systemic laryngeal nerve identification. There were no permanent complications after near total in our series including permanent hypocalcaemia and permanent recurrent nerve lesions with no statistical difference between the two study groups. The vessel sealing used to prevent inadvertent damage to recurrent nerve by systemic. Careful identification and minimized long term effects of inadvertent damage to parathyroid glands.

From the current study one may conclude that the usage of ligasure is a safe technique in thyroidectomy for benign diseases, and it is recommended to use over the clamp and tie technique.

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