World J Surg (2019) 43:291
https://doi.org/10.1007/s00268-018-4647-1

LETTER TO THE EDITOR

Letter to the Editor: A Prospective Comparative Study on Improvement of Hyperthyroid Cardiovascular Dysfunction in Patients Undergoing Total Thyroidectomy Versus Medical Management

M. Shreyamsa[1] · V. Sasi Mouli[1] · Kul Ranjan Singh[1] · Pooja Ramakant[1] · Anand Kumar Mishra[1]

Published online: 2 May 2018

We read the article "A Prospective Comparative Study on Improvement of Hyperthyroid Cardiovascular Dysfunction in Patients Undergoing Total Thyroidectomy Versus Medical Management" [1] with great interest. We congratulate the authors for their study as it deals with a very pertinent issue faced by all endocrine surgeons. However, we have queries which we would like to put forward.

All patients recruited in the study were given antithyroid drugs to render them euthyroid. What was the duration of this treatment and what were the criteria followed to declare a patient euthyroid? The ATA guidelines recommend a minimum of 12–18 weeks of antithyroid drugs as the optimum period for patients who choose medical management [2]. Were the non-surgical group of this study managed in accordance with this? Although surgery is the treatment of choice for patients with toxic multinodular goitre, Radioactive Iodine Ablation (RAIA) is an accepted treatment modality for Graves' disease. Were the patients with Graves' disease educated about it and given the option of RAIA [2]?

As discussed in the paper, patients with diagnosed/known cardiac co-morbidities were left out of the study. How did the authors differentiate cardiac morbidity from hyperthyroidism from that because of co-existing, previously undiagnosed cardiac ailment, especially in older patients? This may be a source of bias, as treatment of cardiac condition with appropriate medications would have resulted in clinical improvement, which then was attributed to surgery. NT pro-BNP is a marker of cardiac morbidity, whose levels are elevated in a variety of conditions, including hyperthyroidism [3]. It is a good marker of systolic dysfunction, which is confounded by a lot of other factors and can be elevated in the absence of cardiac morbidity as well [4] (viz. old age, chronic renal failure), hence cannot be considered absolute marker of reversal of cardiac morbidity in post-thyroidectomy patients.

Lastly, the normal reference ranges for cardiac parameters under consideration in this study are given in Table 1, while those observed in patients are mentioned in Table 2 [1]. Many of the parameters recorded at admission fall within the normal range, as evident in Table 2. How did the authors draw conclusion regarding improvement after surgery considering the fact that these parameters were normal or near normal?

✉ M. Shreyamsa
shreyamsam@gmail.com

[1] Department of Endocrine Surgery, King George's Medical University, Lucknow, Uttar Pradesh, India

References

1. Muthukumar S, Ravikumar K, Dhalapathy S et al (2018) A prospective comparative study on improvement of hyperthyroid cardiovascular dysfunction in patients undergoing total thyroidectomy versus medical management. World J Surg 42(5):1408–1414. https://doi.org/10.1007/s00268-018-4571-4
2. Ross DS, Burch HB, Cooper DS et al (2016) American thyroid association guidelines for diagnosis and management of hyperthyroidism and other causes of thyrotoxicosis. Thyroid 26(10): 2016
3. Mastroianni S, Grembiale A, Succurro E et al (2010) B-type natriuretic peptide (NT-proBNP) and thyroid function: study in elderly subjects. BMC Geriatr 10(Suppl 1):A85
4. Bay M, Kirk V, Parner J et al (2003) NT-proBNP: a new diagnostic screening tool to differentiate between patients with normal and reduced left ventricular systolic function. Heart 89:150–154