

The impact of laser thermal ablation on thyroid-specific quality of life in patients with a solid-cystic thyroid nodule

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Aim:

We investigated the impact of Laser Thermal Ablation (LTA) on quality of life (QoL), using the thyroid-specific patient-reported-outcome measure (ThyPRO) in patients with solid-cystic thyroid nodules.

Methods:

Prospective cohort study investigating the impact of LTA before and three, and six months after LTA using the ThyPRO. The intervention group (IG) was compared to a historical control group (CG) from the Danish civil-registry with no intervention.

Results:

44 SG patients, with no differences in age and sex between IG and CG (n=739) were studied. Solid-cystic nodules were present in 91% of patients while 9 % had a solid nodule. The median nodule volume at baseline was 7ml (range 3-34), and decreased to 2ml (0-34) at six months following LTA ($p<0.001$). Median treatment time was 400seconds (116-600), and the median applied energy was 800J (232-1500). At baseline, QoL in the IG differed significantly from the CG with more Goiter Symptoms, Hyperthyroid Symptoms, Tiredness, Anxiety, and Emotional Susceptibility. At three months, the SG showed large improvement in the Goiter Symptoms scale (effect size (ES)=1.07), and moderate improvement in the Cosmetic Complaint scale (ES=0.52), and in the Overall QoL scale (ES=0.52). The Anxiety scale showed further improvement from 3 to 6 months follow-up (ES=0.51). Post-treatment, compared with the CG, no significant differences were found in any of the ThyPRO scales, except the IG experienced a few more Goiter Symptoms [6 points, 0-100 scale; higher score=more symptoms ($p=0.002$)].

Conclusions:

LTA treatment is effective for improving thyroid-specific quality of life in patients with a solid-cystic thyroid nodule.

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