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**THE EFFECT OF RADIOIODINE THERAPY IN PATIENTS
WITH NON-TOXIC GOITRE**

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Introduction. There is no consensus regarding the optimum treatment of benign non-toxic goitre. Randomised studies have shown that levothyroxine has poor evidence of efficacy and is inferior to radioiodine therapy regarding goitre reduction.

Aim: the aim of our study was to assess the efficacy of radioiodine therapy (RIT) to reduce thyroid volume with minimal risk of hypothyroidism in patients with non-toxic nodular goitre.

Materials and methods. During the last 7 years we treated 150 patients, aged 22–76 years; 88% female and 12% male; initial RAIU after 24 h was ranged between 22 and 44%, and thyroid volume ranged between 44 and 170 ml. Qualifications of these patients were based on normal levels of serum TSH, fT3, and fT4, and characteristic appearance on thyroid scans and ultrasound. Some of the patients complained of compressive symptoms (65 patients). Malignant changes were excluded in all nodules by fine needle aspiration biopsy. The therapeutic radioactivity was calculated by the use of Marinelli's formula and ranged between 400 and 800 MBq. The absorbed dose (Gy) ranged between 180 and 300, and was proportional to thyroid volume. Follow up control was done every 6 weeks.

Results. After 12 months of radioiodine therapy a mean thyroid volume reduction of 46% was achieved in all the patients, euthyroidism persist in 93% of patients, and hypothyroidism develop in eleven patients (7%). All patients were highly satisfied; the compressive symptoms relieved and exercise tolerance improved.

Conclusions. Radioiodine is non-invasive, safe and cost effective method of therapy for reduction of goitre and should be used as first choice in every patient with non-toxic nodular goitre (>40 ml) especially in patients with special professions (singer, teacher) or in patients who wish a non-invasive treatment modality. The reduction of thyroid volume with low percent of hypothyroidism, were due to accurate measurement of administered activity, relatively high effective half-life, and well-organised follow up.