

# One year response rate to 10 mCi radioactive iodine (I131) in patients with relapsed Graves' disease post failure of medical treatment

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## Objectives:

To assess one year response rate to 10 mCi of radioactive iodine ( I131) in patients with relapsed Graves' disease post failure of medical treatment

## Methods:

33 patients who had transient control of clinical manifestations with normal thyroid hormonal profile post at least 12 months of continuous proper dose of neomercazole therapy were included. This was followed by variable period of disease control(range:7-19months).After a mean period of 13.4 months with no thyrotoxic clinical manifestations and more importantly normal thyroid hormonal profile during follow up, all patients had clinically and biochemically confirmed thyrotoxic state with a diagnosis of relapsed primary diffuse toxic goiter (relapsed Graves' disease). All presented for I131 therapy post failure of medical treatment and confirmed relapse. They received 10 mCi of I131 on out patient basis. Patients were followed up for 1 year to assess response to I131 therapy.

**Table 1:** Response rate 1 year post10mCi of I131 in patients with relapsed Graves' disease.

Total number of patients	Overt hypothyroidism	Subclinical hypothyroidism	Euthyroid state	Persistent Hyperthyroidism	Total response	No response
33 patients (100%)	21patients (63.3%)	1 patient (3%)	8 patients (24.4%)	3 Patients (9.1%)	30 patients (90.9%)	3 patients (9.1%)

## Results:

14 patients (40.4%) developed clinical hypothyroidism that was confirmed biochemically 3 months post I131 therapy. 1 year post 10 mCi of I131 both clinical and biochemical data showed overt hypothyroid state in 21 (63.6%). One patient (3%) with subclinical hypothyroidism was diagnosed by thyroid function tests with no clinical manifestations . Normal thyroid function tests with no clinical manifestations of recurrence were reported in 8 patients (24.4%). Considering both hypothyroid and euthyroid states as successful response to I131 therapy, so the overall successful response rate one year after 10 mCi of I131 therapy is 90.9%. Failure of response to 10 mCi of I131 with a need for a second I131 dose was reported in only 3 patients (9.1%) (Table1).

## Conclusions:

10 mCi of I131 is a good therapeutic choice in patients with relapsed Graves' disease with an overall response rate one year post I131 therapy of 90.9%. Hypothyroidism occurs as early as 3 months post therapy in around 40% of patients, increasing to 66.6%, which is subclinical in only one patient (3%), by the end of first year after therapy.

-Malik Mumtaz, Lim Shueh Lin, Khaw et al:  
Radioiodine I-131 For The Therapy Of Graves' Disease.,Malays J Med Sci. 2009 Jan-Mar; 16(1): 25-33.