

OA-A-05

THE EFFECTS OF LOW DOSE RADIOACTIVE IODINE ON OVARIAN RESERVE AMONG PATIENTS WITH GRAVES' DISEASE

<https://doi.org/10.15605/jafes.037.S2.73>

Jin Hui Ho,^{1,2} Serena Sert Kim Khoo,³ Mohd Noor Nurain^{1,2}

¹Endocrinology Unit, Hospital Putrajaya, Malaysia

²Wilayah Persekutuan Putrajaya, Malaysia

³Endocrinology Unit, Queen Elizabeth Hospital II, Kota Kinabalu, Sabah, Malaysia

INTRODUCTION

High dose radioactive iodine (RAI) has been shown to reduce ovarian reserve. We aimed to evaluate the effects of low dose RAI on ovarian reserve among patients with Graves' disease (GD) and factors associated with changes in anti-Müllerian hormone (AMH) level.

METHODOLOGY

Fifty premenopausal women with GD participated in this study; 25 had RAI therapy and 25 were on anti-thyroid drugs (ATD). Serum follicle-stimulating hormone (FSH), luteinizing hormone (LH), estradiol(E2), thyroid-stimulating hormone (TSH), free thyroxine (FT4), anti-TSH receptor antibody (TRab), anti-thyroid peroxidase antibody (anti-TPO) and 25-hydroxyvitaminD levels were measured at baseline while AMH levels were measured at baseline, and at 3- and 6-months follow-up.

RESULTS

The mean age of participants was 31.22 ± 5.27 years with median thyrotoxicosis duration of 36 (68) months. The median dose of RAI was 15 (5) mCi. The mean AMH levels for the RAI-treated group were 22.88 ± 13.20 , 20.75 ± 14.31 , and 21.57 ± 15.33 pmol/L, while the mean AMH levels for medical therapy group were 26.36 ± 17.16 , 24.27 ± 14.28 and 25.07 ± 16.92 pmol/L, respectively at baseline, 3- and 6-months follow-up. Both groups were not significantly different between these time points ($p=0.383$; $p=0.354$). The reduction of AMH levels were $13.15 \pm 30.76\%$ and $2.10 \pm 27.08\%$ at 3 months; $5.04 \pm 38.66\%$ and $5.13 \pm 28.28\%$ at 6 months for RAI and medical therapy group, respectively ($p=0.184$; $p=0.993$). Only the age of menarche was negatively correlated ($r=-0.436$, $p=0.029$) with percentage of changes in AMH level at 3 months after RAI.

CONCLUSION

Low dose RAI has no significant effect on ovarian reserve and age of menarche is negatively correlated with changes in AMH level at 3 months after RAI.