OBJECTIVES

Graves’ orbitopathy (GO) is a common complication of Graves’ disease (GD), the development of which can not be predicted at the time of diagnosis of uncomplicated GD. It is crucial to detect orbital immune activity as active GO tends to respond to immunosuppressive therapy, whereas inactive disease does not. We assumed that orbital autoimmune activity is predictable using orbital 99mTc-labelled diethylenetriamine pentaacetic acid SPECT (DTPA). The procedure is relatively inexpensive, reproducible, and represents little burden for the patient (Figure 1.) We aimed to determine whether any orbital autoimmune activity can be identified in patients who do not develop GO during their follow-up.

MATERIALS AND METHODS

Fifty-four orbits of 27 patients newly diagnosed with GD were entered into the study. Patients with present GO were excluded. None of the patients had received antithyroid drugs or ophthalmic measures before entering the study. An initial DTPA was performed and DTPA uptake as sign of disease activity calculated in each case. SPECT was repeated during follow-up if clinical signs of GO occurred, and a final SPECT was performed at the end of the follow-up period, after one year. Twenty orbits of control patients who underwent DTPA of the hands for Raynaud’s phenomenon served as controls.

RESULTS

During the one-year follow-up period 6 out of the total of 27 patients (22%) were diagnosed with newly developed GO. The mean DTPA uptake at the time of diagnosis of GD of the 6 patients who later developed GO (and before any treatment) was 10.45±1.72 MBq/cm³ (mean±SD). This result was statistically not different from the DTPA uptake of the 42 orbits of patients who were not affected by GO during the follow up period (9.18±1.18 MBq/cm³) but the difference was not significant. However, the DTPA uptakes of both patient groups were higher than that of the control group (7.7±2.44 MBq/cm³), the difference being significant, p=0.013 and p=0.032 for those who later developed GO and who did not, respectively.

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