

Percutaneous ethanol injection therapy for autonomously functioning thyroid nodule

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Four patients with solitary autonomously functioning thyroid nodule (AFTN; 2 toxic and 2 subclinically toxic) received ultrasonography (US)—guided percutaneous ethanol injection therapy (PEIT). The pretreatment scintigraphic appearance of the nodule was hot, and radioactivity in the extranodular tissue was completely suppressed throughout. Ninety-nine percent ethanol was slowly injected under US guidance. As a rule, the injection was performed in fractionated sessions and the treatment was repeated until the total amount of ethanol exceeded the baseline nodular volume. The therapy was successful. Complete remission of hyperthyroidism was observed among the patients with toxic nodule. The basal level of TSH and its response to TRH injection was normalized in the patients with subclinically toxic nodule. Posttreatment scintigrams revealed that the extranodular tissue recovered and radioactivity in the hot nodule had noticeably decreased. The rate of reduction in the nodular volume was more than 80% in all. There was no recurrence or development of hypothyroidism during a follow up of 10 to 23 months. The main side effect was mild and transient pain and/or a burning sensation at injection. No severe or permanent complications occurred. Although the number of our cases was small, the results suggest that PEIT is a useful program in treating AFTN.

Key words: autonomously functioning thyroid nodule, hyperthyroidism, percutaneous ethanol injection therapy