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LETTER TO THE EDITOR

Longer treatment time and lower radiation doses—an alternative for Graves' ophthalmopathy treatment

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We read the article by Weissmann et al. [1] with great interest and commend all authors for demonstrating the efficacy of low- and high-dose radiotherapy (RT) in alleviating Graves' ophthalmopathy (GO) symptoms. The authors reported a 63.8% improvement in symptoms following RT, with no significant differences in overall treatment response between low-dose (0.8 to 4.8 Gy) and high-dose (2 to 20 Gy) radiotherapy. However, adverse effects were reported at a higher rate in the low-dose cohort than in the high-dose cohort (14.8 vs. 3.3%; $p = 0.029$). Although a variety of RT regimens with varying doses and fractionations have been used, no consensus on the optimal dose and fractionation has been reached [2, 3]. Nevertheless, due to the inflammatory nature of the disease and the theoretical advantage of administering a low effective dose to a benign pathologic condition, previous studies have used a protracted regimen administering a low dose [4–6]. Cardoso et al. [4] recently demonstrated improvement in ocular pain, palpebral edema, visual acuity, and ocular motility in 18 patients treated with a total dose of 10 Gy fractionated into 1 Gy once weekly for 10 weeks. Magnetic resonance imaging (MRI) of the orbits was performed on all patients prior to and 6 months after treatment, and MRI revealed a decrease in the thickness of the ocular muscle and the intensity of the T2 sequence signal in the majority of patients. However, Weissmann et al. [1] evaluated treatment response during a single telephone consultation, which may be subjectively biased. Additionally, the rate of symptom palliation was lower and side effects were more severe than in patients treated with a protracted hypofractionation regimen [4–6].

The study by Weissmann et al. [1] requires clarification of a few points. While it was assumed that patients receiving lower doses would experience fewer adverse events, the incidence of adverse events was actually higher in the low-dose cohort. This perplexing result requires a brief explanation. Although the authors stated that no patient who received 20 Gy of RT as primary treatment received a second series, Table 2 indicates that one patient (1.7%) received a second series, a situation that requires clarification.

As a result, this is a significant study demonstrating the efficacy of low-dose RT for symptom relief in patients with GO. However, RT administered at a low dose and over a prolonged period of time should be considered a viable therapeutic option for patients with GO.

Conflict of interest C. Onal and O.C. Guler declare that they have no competing interests.

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