Purpose or Objective: To review our outcomes for patients in the active inflammatory phase of moderate-to-severe Graves’ ophthalmopathy (GO) treated with combined systemic pulsed corticosteroids plus irradiation and demonstrate the role of magnetic resonance imaging (MRI) as a prognostic factor.

Material and Methods: From our database of 35 patients treated with radiotherapy for the active inflammatory phase of GO in our hospital from January 2005 to December 2013, 5 patients were excluded from the analysis because they had a short follow-up, were not treated with pulsed corticosteroids because of liver failure, or had no eye muscle impairment at diagnosis. In the remaining 30 patients in the active inflammatory phase of moderate-to-severe GO treated with combined pulsed corticosteroids plus irradiation, we assessed eye muscle impairment using the SPEC5 system before and 6 months after the start of treatment. A total dose of 20 Gy in 10 fractions was delivered to the bilateral retrobulbar volume. Intravenous 1 g of corticosteroids daily for 3 successive days was repeated weekly up to 3 weeks. The thickness ratio (TR) of the enlarged eye muscle to the optic nerve and the signal intensity ratio (SIR) of the eye muscle to the cerebral white matter were evaluated as the mean of three cross sections of coronal short-time inversion recovery (STIR) sequence MRI to investigate whether these factors could predict the reversibility of eye muscle impairment.

Results: This study included 10 men and 20 women with median age of 55.5 (range, 37-71) years. The thyroid function at the time of irradiation was euthyroid in 26 patients, hyperthyroid in 2, and hypothyroid in 2. Median duration of eye symptoms from onset to the initiation of radiotherapy was 4 months (range, 1.4-22.1 months). Six months after radiotherapy, there was a significant improvement in eye muscle impairment (p < 0.001); complete regression was observed in 10 patients (33%), partial regression in 5 (17%), no change in 14 (47%), and progressive disease in 1 (3%). The median TR was 4.1 (range, 0.4-16.4), and the median SIR was 2.45 (range, 1.7–4.1). There was a trend toward greater, but not significant, improvement in patients with a low TR (<4.2) or high SIR (>2.5) before treatment.

Conclusion: Orbital irradiation combined with pulsed corticosteroids was an effective treatment for the active inflammatory phase of moderate-to-severe GO, especially in patients with a low TR or high SIR on MRI before treatment. A low TR or high SIR may predict the treatment outcome.

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Results: C1 = 109 patients (84 with breast cancer, 13 H&N, 12 pelvis), C2 = 104 (87B, 12H&N, 5P). In C1 27% used a cream and in C2 96% used a cream (p < 0.001). In C2 88/104 complied with policy using the prescribed betamethasone.

Compared to C1, for C2 the mean score was lower for itch (1.3 (0.8-1.8) v 2.8 (2.2-3.4) p < 0.001) and discomfort (2.2 (1.7-2.7) v 3.1 (2.6-3.7) p = 0.021), and when betamethasone was used (comparing the 88 from C2 with 125 from C1 or C2) the mean score was lower for itch (0.9 (0.5-1.4) v 2.9 (2.3-3.4) p < 0.001), discomfort (2.0 (1.4-2.5) v 3.2 (2.6-3.7) p < 0.003), and for pain (1.4 (0.9-1.9) v 2.2 (1.7-2.7) p = 0.03).

With the use of betamethasone, the frequency of a score of >5 was lower for redness (15% with v 34% without) (p = 0.002), itch (7% v 25%, p < 0.001), discomfort (9% v 22%, p = 0.015), but not for pain (9% v 14%, p = 0.29). However, sleep disturbance was less common (7% v 21%, p = 0.006), as was the use of analgesia (7% v 19%, p = 0.015).

Conclusion: The introduction of routine use of prophylactic betamethasone cream for patients with a high risk of radiation skin reaction resulted in a significant reduction in redness, itch, discomfort, sleep disturbance, and on use of analgesia.

EP-1469
Survey on the use of complementary and alternative medicine in a German radiooncology department
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Purpose or Objective: The use of complementary and alternative medicine (CAM) continuously gains importance, even though objective data are mostly missing - also in radiation oncology. However, in previous trials methods such as acupuncture showed significant advantages compared to standard therapies. Hence, the aim of this study is to evaluate the most frequently used methods, their significance and potential effect during radiotherapy (RT), as well as the general acceptance amongst cancer patients.

Material and Methods: A detailed questionnaire was developed consisting of 18 questions based on the categorical classification released by the National Centre for Complementary and Alternative Medicine (NCCAM). From January to September 2015, the survey was conducted with all patients undergoing RT at the department of Radiation Oncology, Technische Universität München (TUM), Klinikum rechts der Isar, Munich. Participation was voluntary and pseudonymous.

Results: Of 571 patients, 289 answered the questionnaire (50.6%), with 44.6% females and 38.4% males participating in the study, and a mean age of 60 years. Of these, 66.1% (191/289) received RT only, 20.4% (59/289) had a combined radio-chemotherapy (RCT). Of all participants, 29.5% (75/289) used CAM parallel to RT. Before RT, a total of 40.8% (118/289) had already used complementary medicine. The current most frequently applied methods were vitamins, dietary supplements, homeopathy and physical therapy, whereas in the past before RT also acupuncture and osteopathy had been regularly used. The majority (72.6%, 210/289) declined the use of any complementary treatment. Of these 210 patients, 73.3% (154/210) stated that CAM treatment was not offered to them. Only 20.4% (59/289) of all participants had discussed adding complementary treatments to their current therapy with their consulting physician. The most common reasons for CAM use were intended by the patients to improve the immune system (47%, 136/289), to reduce side effects (43.2%, 125/289), and to not miss an opportunity (37.3%, 108/289). Assuming their health insurance would not compensate the costs for CAM, 52.5% (152/289) of the patients would pay for their treatment. A treatment integrated in the individual therapy concept, such as regular acupuncture, would be used by 62.9% (182/289) of RT patients. In order to gain more information about the changes in attitude towards complementary medicine, we also handed out the questionnaire a second time after RT during the first follow-up visit (n = 10). This is an ongoing part of the evaluation. However, it becomes apparent that in retrospect the use of CAM increased.

Conclusion: In comparison to other studies, usage of CAM parallel to RT is considered to be low. The acceptance amongst patients is present, however, more information, in terms of personal consultations with physicians, brochures or online information, could encourage a holistic therapy.

EP-1470
Intralesional injection of triamcinolone acetonide in treatment of Radiation Induced Fibrosis
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Purpose or Objective: On the basis of successful intralesional steroid injection for dermatologic scars treatment such as keloids and burn scars, we planned to evaluate intralesional triamcinolone acetonide injection in treatment of RIF as there is no data available for its use for this indication.

Material and Methods: 30 patients with RIF of different sites (19 cases breas, 4 cases neck, 3 back, 2 face and 2 lower limbs) at least 6 months after end of radiation were included in our study. They were treated by intralesional Triamcinolone acetonide injection. Injections were carried out by dermojet at 1 cm interval. Injections were repeated every 2 weeks for 3months. Assessment was done according to RTOG grading before treatment and repeated during and 3 months after end of treatment.

Results: We documented over all response rates of 80%, marked and complete improvement of RIF 43.3%, 30% showed one grade improvement, 6.67% had two grades improvement, while 20% of patients didn’t respond (P-value < 0.001). Pain score was significantly improved (p value < 0.001), 44% of the included patients had complete improvement of pain, 36% had mild residual pain and 20% of patients expressed moderate residual pain. No significant adverse events were observed. The results were significantly better with younger age group (P-value=0.021), smaller BMI (p-value=0.007), patients who received lower radiation doses (P value =0.03), smaller number of radiotherapy treatment sessions (P-value=0.05), smaller radiation field sizes (P value=0.001), and patients with shorter duration of RIF (P value <0.001).

Conclusion: Intralesional triamcinolone acetonide injection can be considered as an effective in treatment of RIF. It can be considered as a promising effective, safe, less costly therapeutic option in treatment of RIF. To the best of our knowledge, no previous data are available about the use of intralesional injection of triamcinolone acetonide for treatment of RIF.

Key words: Radiation, fibrosis, intralesional.

EP-1471
The effect of radiotherapy on Ledderhose disease
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Purpose or Objective: The only treatment option for Ledderhose disease seems radiotherapy as surgery is associated with a high chance of recurrence and morbidity.