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Radioterapia interventistica (brachiterapia, IORT)

EFFICACY AND SAFETY OF ELECTRONIC BRACHYTHERAPY FOR NONMELANOMA MALIGNANT SKIN NEOPLASMS: PRELIMINARY RESULTS OF A PROSPECTIVE PILOT TRIAL

Efficacia e tollerabilità dell'impiego della brachiterapia elettronica nel trattamento delle neoplasie cutanee: risultati preliminari di uno studio prospettico pilota

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Aims: Surface electronic brachytherapy (EBT) is an emerging alternative radiotherapy (RT) solution to external beam electron RT and high-dose-rate radionuclide-based brachytherapy for skin cancers. It can also be used as an alternative treatment to surgery for selected patients (pts). This prospective, single-center, non-randomized, pilot trial evaluates the clinical efficacy, safety and cosmetic results of a new EBT system, named Esteya®. Preliminary results are presented. **Methods:** Between November 2016 and March 2017, 14 consecutive pts (mean age: 85 years, range: 55-96) with nonmelanoma malignant skin neoplasms have been enrolled and analyzed. Two pts presented primary squamous cell carcinomas (SCC) of eyelids and 42.9 % recurrent SCC of the scalp and face, 28.6 % showed recurrent basal cell carcinomas of the nose and 14.3% cutaneous lymphomas. Only lesions with a maximum diameter < 2,5 cm were treated with radiation dose of 40 Gy (5 Gy fraction, 2/week). Pts with cutaneous lymphomas received conventionally fractionated RT of 36 Gy (2 Gy fraction, 5/week). Acute toxicity has been measured according to CTCAE (Common Terminology Criteria for Adverse Events) v4.03 scales and RTOG-EORTC scales were used to assess cosmetic results. **Results:** All pts underwent clinical examination and photographs during RT, 4 weeks, 8 weeks, 3 months, and 6 months after treatment. Toxicity started after the 4th fraction and worsened between the end and 6 weeks after RT. All pts presented erythema: moderate to brisk grade was scored in 71.4% cases (G2 CTCAE). Moist desquamation and crusting were shown by 2 pts, 1 patient presented moderate edema. Late toxicity was scored in 41.8 % pts: 2 pts showed slight pigmentation changes (G1 Late RTOG-EORTC) and 3 pts (25%) presented moderate telangiectasia (G2). A clinical complete response was observed in 91.7% of cases, 1 patient presented residual disease and 1 experienced marginal/in-field recurrence. Out-field recurrence was observed in 1 patient. **Conclusions:** Our preliminary results show that Esteya® is an effective, simple, safe, and comfortable treatment associated with good cosmetic outcomes for nonmelanoma malignant skin neoplasms. Even if a longer follow-up, a bigger sample size and more studies are needed to confirm these preliminary findings, EBT can be an alternative solution for elderly pts, for pts



refusing or presenting contraindications for surgery or when surgical treatment would result in a more disfiguring outcome.

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