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Service (sector) Laboratory - Tumors and Pathology N° CEP

Brachytherapy with Ruthenium 106 : A new option for the treatment of choroidal melanomas in Brazil.

Sector : Tumors and Pathology Authors : L.M.Doí , L.F.Teixeira , R.S.Dias , R.Segreto , C.M.Erwenne Introduction : Preservation of the eye and any remaining vision in patients with uveal melanomas became possible after the introduction of new modalities of treatment such as brachytherapy. Ruthenium 106 emits beta particles with a long half-life, high energy and limited tissue penetration, which permits an optimized form of therapy, with the highest dose delivery to the tumor and a sparing of radio-sensitive structures within the eyeball. It has been extensively used in European centers since the sixties with good results. Purpose : To present an alternative brachytherapy radioisotope for small and medium sized uveal melanomas. Design : Prospective interventional case report Case presentation: A 46-year-old white man was referred to the Ocular Oncology Service of UNIFESP for the treatment of a choroidal melanoma in his left eye. He had experienced a progressive blurring of vision in his left eye for the last month. On initial ocular evaluation, his best-corrected visual acuity was 20/20 OD and 20/40 OS. Intraocular pressure was 12 mmHg OU and slit lamp examination was normal. Fundus examination results revealed a medium-sized melanoma under the inferior-temporal arcade associated with some exudates and subretinal fluid in the macular region. An ocular ultrasonography was performed and revealed a solid lesion of medium-low reflectivity with a kappa angle, localized in the posterior pole with dimensions of 10 x 3.35 x 3,75 mm (l/l x height x a/p). The staging exams were all normal. Ru-106 plaque radiotherapy was then indicated. He was treated using brachytherapy with a semicircular Ru-106 plaque - COB-549 (BEBIG – Berlin, Germany). The total irradiation dose to the tumor apex was 9964.8 cGy and to the tumor base 35884.8 cGy, delivered during 2 days of hospitalization in the Radiotherapy sector of UNIFESP. The patient has been followed up with periodic ocular and ultrasonographic examinations. The lesion has been showing signs of regression and no significant complications have been noted. Conclusion : We observed in this case of a medium sized melanoma, a good initial response and no important radiogenic side effects. Brachytherapy with Ru-106 seems to be an effective, simple and safe procedure to treat patients with small and medium choroidal melanomas, especially in the public health services.