Proton beam radiotherapy for clivus chordoma

Singh et al. found that Hyperthermia (HT) combined with Proton Beam Radiation (PBRT) could significantly increase chordoma cell death by activating the death receptor pathway and apoptosis which has the promise to treat metastatic chordoma [1)].

In an Italian multicentric study, patients received adjuvant proton beam radiation in 115 of 182 cases (63.2%), which was administered more in the latter era. Five-year progression-free survival (PFS) and overall survival (OS) were 62.3% and 73.5%, respectively. GTR, EETA, proton beam therapy, and the chondroid subtype correlated with a better survival rate. The mean follow-up was 62 months.

Through multicentric data collection, this study encompasses the largest series in the literature of clival chordomas surgically treated through an EETA. An increase in the use of this approach was found among Italian neurosurgical departments together with an improved extent of resection over time. The satisfactory rate of GTR was marked by low surgical morbidity and the preservation of patient quality of life. Surgical outcome was reinforced, in terms of PFS and OS, by the use of proton beam therapy, which was increasingly performed throughout the period of study. [2)].

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