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ENDORESECTION OF LARGE UVEAL MELANOMAS IN HUNGARY: RESULTS OF AN INTERNATIONAL COLLABORATION ESTABLISHED IN 2023

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Background: The treatment of uveal melanoma typically includes irradiation, surgical excision, and enucleation. Managing large uveal melanomas poses significant challenges due to the severe side effects of irradiation, which is only available in specialized oncological ophthalmology centers. Since 1986, Hungary has utilized Ru-106 brachytherapy for small and medium-sized tumors, while large uveal melanomas were treated exclusively by enucleation. In 2023, a collaboration between the University of Essen and the University of Debrecen was established to develop standard operating procedures for treating large uveal melanomas using neoadjuvant radiotherapy and endoresection. The first endoresection procedure in Hungary was performed on December 7, 2023, at the University of Debrecen.

Methods: This study reports the outcomes of the newly introduced endoresection technique for large uveal melanomas at the University of Debrecen. The study cohort consisted of 18 patients treated between December 7, 2023, and March 24, 2025. Patient demographics, tumor characteristics, and post-treatment outcomes, including visual acuity and eye preservation rates, were analyzed.

Results: Eighteen patients (12 men, 6 women) with a mean age of 52.4 years underwent the combined neoadjuvant radiotherapy and endoresection procedure. All patients had large uveal melanomas unsuitable for Ru-106 brachytherapy due to tumor thickness exceeding 7 mm. The mean tumor thickness was 8.98 mm, and the mean basal diameter was 13.84 mm. After an average follow-up of 7.1 months, all eyes were salvaged, and the patients achieved a mean visual acuity of 0.30 (SD 0.30; range: 0.02-1.0). During the follow-up period, one patient developed metastasis.

Conclusion: This study demonstrates the successful establishment of a new treatment approach for large uveal melanomas in Hungary through international collaboration. Although endoresection after radiotherapy cannot prevent metastasis, it provides significant quality-of-life improvements by preserving eyes with functional vision. These findings emphasize the value of international partnerships in advancing ophthalmic oncology care.