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## Ruthenium Plaque Radiotherapy for Residual or Recurrent Retinoblastoma Tumors

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Purpose: To evaluate the potential benefit and complications of ruthenium (Ru-106) plague radiotherapy in the management of recurrent or residual retinoblastoma. Design: Prospective, noncomparative, interventional case series. Methods: Seven patients with recurrent or residual retinoblastoma were treated with ruthenium plaque radiotherapy. Prior treatment to these retinoblastomas included various combinations of treatments such as intravenous chemoreduction, external beam radiotherapy, laser photocoagulation, thermotherapy, and cryotherapy. The patients had pretreatment and posttreatment indirect ophthalmoscopy examination under anesthesia and ultrasonography for tumor measurement. The mean dose of 42Gy (range 3975 - 4774cGy) was prescribed to the apex of the tumor. Results: Diminished tumor height and a type 4 regression were observed in 6 patients. Two patients had vitreous base seeding controlled completely. No complications were noted during the procedure or in the follow up (mean of 4 months). Conclusion: Ruthenium plaque radiotherapy should be considered as an important option for recurrent retinoblastoma after failure of other methods to achieve tumor control and to avoid enucleation.