Surgical Treatment of Retinal Hemangioblastomas

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Retinal hemangioblastomas (RHs) are benign vascular tumours that appear as round, circumscribed lesions found in the peripheral or juxtapapillary retina. They can occur as isolated vascular abnormalities or as manifestations of von Hippel–Lindau (VHL) disease. Despite being slow-growing, RHs are capable of causing significant visual morbidity. Visual loss can be caused by exudative or tractional retinal detachment (RD). Challenges of treatment are the multifocality, bilaterality, growth in the juxtapapillary region as well as a possible complicated tumour progression. Applied treatment methods include laser photocoagulation, cryotherapy, radiotherapy, photodynamic therapy (PDT), transpupillary thermotherapy (TTT), systemic therapies and vitreoretinal surgery. Applicability and efficacy are highly dependent on tumour size and presence of exudation and traction. Vitreoretinal surgery is usually performed for large RHs or those complicated by exudative or tractional RD. Considering ongoing advancements in vitreoretinal surgical equipment and techniques, reduced surgical risks have offered the option of treating lesions prior to the development of extensive complications. This might allow surgical treatment to take place before visual deterioration occurs, possibly improving the long-term visual prognosis.