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37. Surgical Management of Progressive Visual Loss in Optic Gliomas of Childhood

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Optic gliomas of childhood, by virtue of their location and growth patterns, may affect visual acuity and/or hypothalamic function. Visual loss may be due to infiltration by the tumor, or to its pressure on the optic chiasm or nerves. The natural history of these tumors, as well as their therapy, has been controversial. Recently, radiation therapy has been touted as the mainstay of management for tumor progression. This modality, however, requires several weeks, and its effects in shrinking the tumor and preventing or reversing visual loss may need weeks to months to materialize. We have observed 3 children with biopsy-proven optic gliomas, who presented with acute or subacute visual deterioration. All had severely compromised to absent vision in one eye and deterioration in the other. These children were managed surgically, with subsequent marked improvement to stabilization of their vision (see Table). The surgical approach was frontal, either transcallosal or pterional, with minimal morbidity. Thus, it appears that surgical resection is a feasible, rapidly effective alternative to radiation therapy in the management of visual loss in children with optic gliomas.

Patient No.	Age/Sex	Vision Preop.		Vision Postop.		Other	Surgical approach
		O.D.	O.S.	O.D.	O.S.		
1	7 yr/F	20/800	20/70	20/400	20/70	L HH	Pterional
2	5 yr/M	20/200	CF 3 ft	20/70	CF 3 ft	Temporal defect	Transcallosal
3	22 mo/F	None	↑ F.C.	None	Stable	Temporal defect	Transcallosal

HH = homonymous hemianopsia; CF = count fingers; F.C. = field cut; O.D. = right eye; O.S. = left eye.