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REFERENCES

1. Zou C, Zhao Z, Tang L, Chen Z, Du L. Effects of lead on brainstem auditory evoked potentials in children. *J Chin Med*, 2003; 116: 565-568.
2. Yan CH, Shen XM, Zhang YW, He JM, Zhou JD, Ao LM, *et al*. An epidemiological survey on blood lead level and high-risk factors for lead poisoning of children in Shanghai. *China J Pediatr*, 1998; 36:142-145.
3. Qin R, He SX, Chen RH, Chen XH, Zhao RZ, Dai JG, *et al*. A survey on blood lead levels of children aged 2-6 years in Jiangsu province. *China J Pediatr*, 1998; 36:178-179.
4. Thomas VM, Socolow RH, Fanelli JJ, Spiro TG. Effects of reducing lead in gasoline: an analysis of the international experience. *Environ Sci Technol*, 1999; 33: 3942-3948.
5. Yang RL, Zhao ZY, Chen HY, Li LF, Chen HY, Zhang LZ, *et al*. Analysis of lead levels in 1320 preschool children of Zhejiang province. *Zhejiang University Med Sci*, 1999; 28:160-162.

Chronic Renal Failure with Retinal Detachment

We read with interest the article "Chronic Renal failure in Children" by Hari *et al*. They have dealt in detail on the etiology of chronic renal failure (CRF) from a large pool of cases attending their clinic. Since the authors have also covered on the issues of management we have a small query. Did they come across any case of CRF with visual problem or retinal detachment? Were they routinely doing ophthalmological examination in their follow up cases? Recently, we came across a 15-year-old girl, who presented to ophthalmology department as bilateral loss of vision. On examining her eye she was found to have bilateral bullous retinal detachment. Her general physical examination revealed she had severe hypertension (above 99th centile for her age) and subsequently her investigation revealed as having CRF. When we reviewed

the literature (Medline Search), we found that retinal detachments are a known complication of chronic renal failure, though majority of case reports and series are from adult patients. Numerous hypothesis have been suggested for retinal detachments-dilutional hyponatremia(2), severe hypertension(3), ischemic infarction of choroids(4) and choroids spasm(5). Multiple factors may be operable simultaneously. The interesting part is that the retinal detachment is reversible when various causes or the complications are managed adequately and that includes renal transplantation as well. We feel that reversible retinal detachment occurring in association with renal insufficiency has not been emphasized sufficiently in pediatric literature. It would be worthwhile for patients with chronic renal disease to undergo a complete retinal examination including indirect ophthalmoscopy routinely, so as to detect and treat this condition. It is probably not rare, but will be seen more frequently if looked for carefully.

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REFERENCES

1. Hari P, Singla IK, Mantan M, Kanilkar M, Batra B, Bagga B. Chronic renal failure in children. *Indian Pediatr* 2003; 40: 1035-1042.
2. Lapco L, Weller JM, Greene JA. Spontaneously reversible retinal detachment I occurring during renal insufficiency. *Ann Intern Med* 1965; 63: 760-765.
3. Buchanan WS, Ellis PP. Retinal separation in chronic glomerulonephritis. *Arch Ophthalmol* 1964; 71:182-189.
4. Steiness IB. Reversible retinal detachment in renal insufficiency. *Acta Med Scand* 1968; 183: 225-227.
5. Paris GL, Macoul KL. Reversible bullous retinal detachment in chronic renal disease. *Am J Ophthalmol* 1969; 67: 249-251.

Reply

We appreciate the comments of Basu and Jain, and their observation of retinal detachment, severe hypertension and chronic renal failure (CRF). The authors have asked about a routine ophthalmologic examination. Detailed ophthalmological examination was done only in subjects who had visual problems or hypertension in addition to those with hereditary nephropathy. In our series of 305 patients, 134 (43.8%) had hypertension and all these underwent eye evaluation. Patients had mild to moderate hypertensive changes in the fundus but none had retinal detachment. There is a possibility that subclinical detachment could have been missed in those who were not evaluated.

There are occasional case reports of retinal detachment in association with CRF in adults

but the only reported retinal changes associated with pediatric CRF are retinal degeneration and retinitis pigmentosa(1-3). Even in adults it is a relatively uncommon complication. In a report on 330 patients of pediatric retinal detachment in children, the chief causes were myopia, retinoschisis, cataract, glaucoma and ocular trauma(4). There are some anecdotal reports of association of retinal detachment with hypertension in childhood, but none had underlying CRF(5).

Based on the results of our patients that underwent eye examination, retinal detachment seems uncommon in children with CRF. The etiology of CRF as well as the fluid and electrolyte abnormalities are different in children as compared to adults, which might explain the relative paucity of ocular complications in them.

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REFERENCES

1. Wagdi S, Dumas J, Labelle P. Retinal detachment in renal insufficiency: A report of 3 cases. *Can J Ophthalmol* 1978; 13: 157-159.
2. Grass JD. Bullous retinal detachment and multiple retinal pigment epithelial detachments in patients receiving hemodialysis. *Graefes Arch Clin Exp* 1992; 120: 454-458.
3. Arias M, Zubimendi JA, Val F, de Castro S, Llamazares C. Familial interstitial chronic nephropathy [nephronophthisis and tape-to-retinal degeneration (Senior-Loken syndrome)]. *Rev Clin Esp* 1975; 138: 481-485.
4. Lemrini F, Dafrallah L, Kabbaj A. Retinal detachment in children. *J Fr Ophthalmol* 1993; 16: 159-164.
5. Meire FM, De Laey JJ, Van Thienen MN, Schuddinck L. Retinal manifestations in fibromuscular dysplasia. *Eur J Ophthalmol* 1991; 1: 63-68.