



Figure 2 Facial view in nine positions of gaze showing bilateral ocular motility restriction.

nerve or due to the localized dystrophic changes in the ocular muscles, a fact that can be speculated but not substantiated. It would therefore be reasonable to presume that there are sequential ocular motility changes in a patient with AMC; a larger series would be required to establish the sequence.

References

- 1 Gordon N. Arthrogyrosis multiplex congenita. *Brain Dev* 1998; **20**: 507–511.
- 2 Hall JG. Arthrogyrosis multiplex congenita: aetiology, genetics, classification, diagnostic approach, and general aspects. *J Pediatr Orthop B* 1997; **6**: 159–166.
- 3 Grill F. Arthrogyrosis multiplex congenita. *J Pediatr Orthop B* 1997; **6**: 157–158.
- 4 Paez JH, Tuulonen A, Yarom R, Arad I, Zelikovitch A, BenEzra D. Ocular findings in arthrogyrosis multiplex congenita. *J Pediatr Ophthalmol Strabismus* 1982; **19**: 75–79.
- 5 Brooks JG Jr, Coster DJ. Arthrogyrosis multiplex congenita: a report of two cases. *Aust N Z J Ophthalmol* 1994; **22**: 127–132.
- 6 Kulkarni MV, Panjabi M. Congenital glaucoma—an association with arthrogyrosis multiplex congenital—a case report. *Indian J Ophthalmol* 1988; **36**: 179–181.
- 7 Miller BA, Pollard ZF. Duane's retraction syndrome and arthrogyrosis multiplex congenita. *Surv Ophthalmol* 1994; **38**: 395–396.
- 8 Schrander-Stumpel CT, Howeler CJ, Reekers AD, De Smet NM, Hall JG, Fryns JP. Arthrogyrosis, ophthalmoplegia, and retinopathy: confirmation of a new type of arthrogyrosis. *J Med Genet* 1993; **30**: 78–80.
- 9 Zeiter JH, Boniuk M. Ophthalmologic findings associated

with arthrogyrosis multiplex congenita: case report and review of the literature. *J Pediatr Ophthalmol Strabismus* 1989; **26**: 204–208.

P Puri, M Gupta and J Chan

Department of Ophthalmology
Royal Hallamshire Hospital
Glossop Road
Sheffield S10 2JF, UK

Correspondence: P Puri
E-mail: pankajpuri35@hotmail.com

Sir,

Nasolacrimal duct obstruction following chickenpox
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A case of epiphora and dacryocystitis following an attack of chickenpox is presented. The child was well before the onset of the attack. The ocular symptoms during the illness suggest local viral infection.

Case report

A 7-week-old boy was referred by his GP with a 2-day history of a red swelling at the left inner canthus associated with a watery left eye and discharge. One week previously he was noted to have bilateral watery eyes, and was diagnosed by his GP as having conjunctivitis. The right eye settled spontaneously over 3 days. Five weeks previously he had chickenpox. During the illness, vesicles were noted to be present medially on his left lower eyelid margin. This was associated with a mild red eye at the time, that settled spontaneously over a week. He had no other past medical history. On examination he appeared well and was afebrile. Ocular examination confirmed left dacryocystitis. He was admitted to the paediatric ward, conjunctival swabs were performed and intravenous co-Amoxiclav was commenced. Within 2 days the swelling had improved and antibiotic therapy was continued orally for a week. At 3 weeks he had a persistent non-tender expressible swelling at the medial canthus and normal ocular examination. With gentle massage over the medial canthal area the swelling gradually resolved over 6 weeks. He remained well during this course, with no symptoms of epiphora.

Comment

Lacrimal canaliculus obstruction, in the form of a localised dense fibrous common canalicular scar, is a known complication of viral infections such as chickenpox.¹ Ocular involvement in systemic chickenpox is rare and has been reported to occur in less than 5% of cases.² The majority of these cases would be vesicles on the eyelids or conjunctiva. It is not known, however, what proportion cause lacrimal canaliculus obstruction or nasolacrimal duct obstruction.

To the author's knowledge, nasolacrimal duct obstruction and dacryocystitis after chickenpox has never been reported.

In view of the circumstances of this case, there is little doubt that varicella-zoster virus infection caused lacrimal obstruction. There was no epiphora or dacryocoele prior to the onset of the infection. Vesicles were noted to be present on the lower eyelid margin and this was associated with a mild red eye at the time of infection. Tearing was noted after the illness (4 weeks after the initial onset of chickenpox). This is consistent with the findings of Sanke and Welham¹ who described three cases, all of whom developed symptoms immediately after an attack of chickenpox. Canalicular obstruction secondary to varicella-zoster virus infection often requires surgery in the form of

dacryocystorhinostomy (DCR) or canaliculo-DCR, with intubation. In the event of extensive or proximal canalicular involvement, a Jones' tube procedure is indicated.^{1,3,4}

It has been suggested that in the event of ocular involvement during an attack of chickenpox, local antiviral treatment may help prevent lacrimal complications.^{1,3} However, due to the rare nature of this condition, the degree of spontaneous resolution of acquired lacrimal obstruction due to chickenpox is not known. This has not been evaluated in any prospective study and to the author's knowledge, no retrospective data exist to support this suggestion either.

References

- 1 Sanke RF, Welham RAN. Lacrimal canalicular obstruction following chickenpox. *Br J Ophthalmol* 1982; **66**: 71–74.
- 2 Griffin WP, Searle CWA. Ocular manifestations of varicella. *Lancet* 1953; **ii**: 168–169.
- 3 Harley RD, Stefanyszyn MA, Nelson LB. Herpetic canalicular obstruction. *Ophthalmic Surg* 1987; **18**: 367–370.
- 4 Rose GE, Welham RA. Jones' lacrimal canalicular bypass tubes: twenty-five years' experience. *Eye* 1991; **5**: 13–19.

R Malhotra
S Hague

Oxford Eye Hospital
Radcliffe Infirmary
Oxford, UK

Correspondence: R Malhotra
Tel: +44 (0)1865 311188
E-mail: malhotraraman@hotmail.com

Sir,

Biofilm formation and coccal organisms in infectious crystalline keratopathy

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We present a patient who developed Infective crystalline keratopathy (ICK) after penetrating keratoplasty. Scanning electron microscopy revealed coccal microorganisms surrounded by mucopolysaccharides consistent with a biofilm. Coccal organisms have not previously been reported in association with biofilm and ICK.