Late onset esotropia in monozygous twins

zygous as less than 0.001. On considering this in conjunction with other results monozygosity is almost certain.

Comment

Although strabismus has been reported in siblings and twins its most common form is during early infancy or childhood. To our knowledge there has been no previous case report of late onset concomitant esotropia in monozygous twins. However, one case of its occurrence in four members of the same family has been reported. From the comprehensive review by Burian and Millar we could consider our case as type II late onset esotropia which is also known as Franceschetti type. They were not myopic as in type III (Bielchowsky) and nor was the onset caused by ocular occlusion as in type I (Swan).

When a previously normal child presents with sudden onset of esotropia accompanied by diplopia after the age of 4, it will be of concern to both the parents and the treating ophthalmologist, aware that this might be the presenting sign of serious intracranial pathology.

Williams and Hoyt reported a series of six such patients in whom tumours of the brain stem and cerebellum were subsequently detected. However in his series three of them had nystagmus and none of them demonstrated binocular potential. Four of the cases underwent strabismus surgery but none established ocular motor fusion. This is in sharp contrast to previously reported cases and in our twin case where binocular potential was always present and the patients had restored BSV following surgery. For example in a series of six patients reported by Clark et al, results of neuroradiological investigations including spinal tap and Tension tests were negative in all cases. All their patients showed binocular potential and did not develop suppression.

Since all the previous reports have been of individual cases this twin presentation may be of relevance to the aetiology of the condition, and the concern as to how far such cases should be investigated. Many authors have reported that heredity plays an important role in the control of eye movement and in the genesis of strabismus. This twin presentation would point to such a hereditary basis for the development of late onset esotropia in at least some of the cases.

We feel that this provides further support for a policy of avoiding neuroradiological and other invasive investigations in children with isolated late onset esotropia who demonstrate the potential for binocular vision. By contrast patients with this condition who have additional neurological signs or who lack the potential for binocular vision must be further investigated.

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Presumed corneal intraepithelial neoplasia associated with contact lens wear and intense ultraviolet light exposure

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Abstract

Corneal intraepithelial neoplasia (CIN) is a rare dysplastic process affecting mostly elderly fair-skinned people. A variant of the disease associated with contact lens wear was recently described. The three cases reported here had a history of contact lens wear together with strong ultraviolet light exposure. These two conditions may represent a serious risk factor for the development of CIN.

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Corneal intraepithelial neoplasia (CIN) is a rare dysplastic process ranging from mild dysplasia to neoplasia affecting mostly elderly fair-skinned
people. CIN was classically reported in association with an adjacent conjunctival limbal lesion (papilloma, leucoplasia, or pterygium). Aetiological factors incriminated include x rays, ultraviolet light, or exposure to chemicals. A variant of the disease associated with contact lens wear was recently described.\(^2\) The three cases reported here of presumed CIN had a history of contact lens wear together with high ultraviolet light exposure.

**Case reports**

**CASE 1**

A 38-year-old woman had a 2 month history of blurred vision, discomfort, and itching in her left eye. She had been a soft contact lens wearer for 8 years and regularly practised ‘sun-tanning’ under artificial ultraviolet light when wearing contact lenses. Visual acuity was 1.0 (20/20) in both eyes. On the left a 2-8 mm broad semicircular band of irregular thickened corneal epithelium extended centrally from the limbus and stained faintly with fluorescein (Fig 1). Mechanical abrision of the epithelium was performed for cyt pathological analysis that showed mild dysplasia. Treatment consisted of retinoic acid ointment (0.05% twice daily) tapering over a period of 6 months. The patient was asked to discontinue contact lens wear and no recurrence of the lesion was seen during a 2 year follow up.

**CASE 2**

A 34-year-old woman had a 2 month history of blurred vision. Her visual acuity was 0.9 (20/25) in the right eye. She had a grey corneal paralimbal lesion with the appearance of a jellyfish on the 10 o’clock meridian of the right eye. The lesion stained faintly with fluorescein (Fig 2). She had a 9 year history of soft contact lens wear, no history of manifest ultraviolet lamp exposure, but she did go sailing wearing her contact lenses. After cessation of contact lens wear, the lesion progressively disappeared. No recurrence was seen during a 2 year follow up.

**CASE 3**

A 31-year-old man who had been a soft contact lens wearer for 5 years had bilateral ocular discomfort associated with a bilateral greyish superior thickening of the paralimbal corneal epithelium. He skied at high altitudes wearing his contact lenses. Because of limited involvement in this case, only discontinuation of contact lens wear and artificial tears were prescribed. The lesion disappeared and had not recurred at an 18 month follow up.

**Comment**

An association of CIN and contact lens wear has been reported recently by Robin.\(^2\) Contrary to the classical cases, most of these patients were young, had bilateral involvement, and no associated conjunctival lesion.\(^2\) Our three cases had typical lesions of CIN and were comparable with the cases of Robin (age, type of lesion, contact lens wear). In addition they all had in common strong and repetitive ultraviolet light exposure while wearing their contact lenses.

Epithelium abrasion seems to be the treatment of choice in CIN.\(^1\) Theoretic and diagnostic debridement was only performed in patient 1, as the two other patients had minimal lesions which regressed spontaneously once the irritating factor was removed. Because recurrence is often seen we introduced retinoic acid therapy in patient 1. Retinoic acid is an anticancerous drug that acts by reprogramming cancerous cells.\(^4\) We have used it successfully when treating rare cases of squamous cell carcinoma, either alone, because surgery was impossible, or as complementary therapy when recurrence was anticipated.\(^5\)

Our findings suggest that contact lens wear and intensive ultraviolet light exposure together may represent a serious risk factor for CIN even in young patients. Retinoic acid may be useful in serious cases of ultraviolet light induced contact lens associated CIN.

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