Globally we need more comprehensive vision-screening strategies

Cross et al's1 recent online article in your esteemed Journal shows that, at present, there is insufficient evidence to support the efficacy of the vision screening test as a preventive strategy to reduce motor vehicle crashes among older drivers. Vision is the most important source of information during driving, and many driving-related injuries have been associated with visual problems.2 Therefore, visual assessment for driving is paramount to the prevention of crash-related injuries. Visual tasks that are involved in driving include selective and divided attention and cognition.3

Licensing authorities in many jurisdictions throughout the world use simple strategies to measure driving fitness utilising simple visual acuity tests, but it is not clear that the vision tests used actually assess the visual skills necessary to drive safely.4 Furthermore, research has shown that visual acuity alone is not an appropriate method for assessing full visual function,5 which includes other vision components such as visual field and contrast sensitivity to name a few. New vision-screening methodologies and standards for fitness to drive are now urgently required in order to promote road safety.6,7 Evidence shows that visual field, body coordination and reaction time influence fitness to drive. A recent prospective cohort study conducted by the Motor Vehicle Administration (MVA) in Maryland demonstrated a relationship between performance-based risk factors and subsequent at-fault crashes among older drivers.8 The study concluded that a driver had to be physically, mentally, medically and functionally fit in order to operate an automobile. Currently, these factors are not evaluated by licensing authorities.

The common standard threshold used for visual acuity is 20/40 (0.50, 6/12), and this is an accepted requirement for driving in many countries. However, this criterion varies from country to country, and most agree that visual acuity in the better eye of 20/40 (0.50, 6/12) is acceptable.9 For example, USA jurisdictions differ on the required minimum visual acuity and minimum visual-field necessary to pass a screening test. Furthermore, some states assess colour vision, depth perception, contrast sensitivity and disability glare, while others do not. It is interesting to note that the way in which visual acuity itself is measured differs among countries.9 For example, in North America, visual acuity is measured by a Snellen chart in the driving licence office, while UK authorities simply ask a driver to read a number plate for visual acuity.6,7 With respect to the renewal of a driver’s licence, there is also considerable variation. For example, jurisdictions across the USA differ in requiring road tests, vision screening, renewal in person, by mail or by internet.1

This evidence illustrates that practices in the USA and many other countries governing required vision screening and licensing of older drivers vary significantly. Given the extent of this variation, it is understandable that evidence relating to the effectiveness of vision screening is inconclusive.4 Importantly the tools that are currently available for licensing authorities to assess fitness to drive tend not to be scientifically derived or validated and rely heavily on subjective rather than objective conclusions.5 There is a need, therefore, for the development of valid, evidence-based instruments to aid licensing authorities in determining fitness to drive.4,4 Clinically sensible screening and assessment tools are required in order that licensing agencies can assess fitness to drive, and promote and facilitate safe licensing of older drivers.2

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Competing interests: None.

Accepted 15 December 2008


REFERENCES


Minimally invasive strabismus surgery

In 2007, I published in the British Journal of Ophthalmology a new, minimally invasive access technique for primary horizontal rectus muscle recession and plication and its results.1 I suggested performing these types of surgeries using only two, small paraminsertional openings. The term minimally invasive surgery (MISS) was proposed for all types of strabismus surgeries1 minimizing the total opening size of the conjunctiva by using only keyhole cuts where absolutely necessary to perform the surgical steps, (2) avoiding disruption of the perilimbal episcleral vessels,2 and (3) allowing the visibility of the surgical site to be increased, if necessary, by joining the cuts. During the 52nd Meeting of the European Strabismological Association in Munich in September of 2008, I found out that in 1994 Marc Gobin, at that time Director of the Department of Orthoptics of the University of Leiden, Belgium, published the same access technique for rectus muscle loop recessions in his book entitled “Chirurgie horizontale et cycloverticale simulée du strabisme”.3 I would like to give the credit to him for having described the idea to use two paraminsertional cuts to perform rectus muscle surgery. In a personal communication on the phone, he explained to me that he unfortunately only started with this technique shortly before retiring. That is the main reason why he was no longer able to promote and advance this type of surgery. In-between, I was able to show that Gobin’s paraminsertional cuts for parainsertional recessions of rectus muscle recessions and plications4 to be done, but also rectus muscle repeat surgery,5 rectus muscle posterior fixation surgery,6 graded inferior oblique recessions5 and rectus muscle transposition surgery7 can be performed using keyhole openings and the principles of MISS.

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Competing interests: None.

Accepted 20 December 2008


REFERENCES


2. Kushner BJ. Minimally invasive strabismus surgery. Comparison of a new, minimally invasive strabismus

**Education**

**ANSWERS**
From questions on page 835

1. Describe the corneal lesions
The corneal lesions present as asymptomatic inconspicuous subepithelial round lesions with focal active keratitis. After treatment with topical corticosteroids, the keratitis disappears but the subepithelial round nebulae persist. Previously, keratitis was sporadically reported in paediatric sarcoidosis but the persistent nebulae have so far not been described.

2. What are the yellow lesions of the retina?
The yellow chorioretinal lesions are probably small choroidal granulomas. The appearance and histology of these lesions are similar to those of Dalen–Fuchs nodules of sympathetic ophthala. Large granuloma of the choroid might resemble choroidal tumours. In our patient, choroidal lesion developed 4 years after the onset of ocular disease.

3. Which ocular features differentiate between the diagnosis of sarcoidosis and juvenile idiopathic arthritis?
The clinical characteristics of juvenile idiopathic arthritis include anterior uveitis without posterior segment involvement. In sarcoidosis, all parts of the eye may be involved in the inflammation. Posterior segment involvement in sarcoidosis is typical and is characterised by multifocal choroiditis, choroidal granuloma, vasculitis and perivascular sheathing.

**DISCUSSION**
We report on focal keratitis complicated by subepithelial corneal nebulae and uveitis in a girl with biopsy-proven sarcoidosis. She suffered from fever, arthritis and skin rash, which are frequent systemic symptoms of preschool sarcoidosis. Our patient developed posterior segment involvement 4 years after the onset of ocular disease, specifically the formation of multiple small choroidal granuloma, features typically associated with sarcoidosis. Although the diagnosis of sarcoidosis was suspected, it took at least 4 years before this suspicion could be confirmed by biopsy. In addition, we noted focal keratitis with subsequent nebulae in an additional two children with preschool sarcoidosis (fig 1B).

Sarcoidosis is difficult to diagnose in preschool children. These children frequently present with rash, arthritis and uveitis, similarly to our patients. These corneal opacities occurred in all our patients with preschool childhood sarcoidosis, but were not present in the older children with biopsy-proven sarcoidosis seen in our institution (n = 2). However, whether these corneal changes are really symptom-typical of preschool sarcoidosis cannot be concluded from only three patients.

Various ocular manifestations of sarcoidosis in childhood have been described in the past, but keratitis with multiple nummular subepithelial infiltrates was not mentioned in a review of 26 children with sarcoidosis. These corneal opacities are inconspicuous and might therefore easily have been overlooked. So far, only very sporadic cases with interstitial keratitis and keratoconjunctivitis as presenting symptoms of paediatric sarcoidosis have been reported. We conclude that keratitis with multiple subepithelial corneal nebulae might occur in the early stage of sarcoidosis in children. We recommend considering the diagnosis of sarcoidosis in children with arthritis and this specific corneal involvement.


**REFERENCES**
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Br J Ophthalmol 2009 93: 843-844
doi: 10.1136/bjo.2008.155994

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