MR MATTHEW J. STARR, MD FAAOPHTH FRSM

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MEDICAL REPORT PREPARED ON:

MR S. T.

ADDRESS:

DATE OF BIRTH:

DATE OF EXAMINATION:

INSTRUCTING PARTY'S REFERENCE:

OTHER REFERENCE:

REPORT PREPARED BY: **MR M. J. STARR MD FAAOPHTH FRSM**

The consultation and examination were carried out at 75 Harley Street on . Mr T. was not accompanied during the appointment. This report is based on records of that appointment and on the following documents:

- Letter of instruction from
- Medical records from the GP
- Hospital records

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STATEMENT OF OBLIGATION

I understand that my duty is to provide a comprehensive and impartial opinion for the court on matters that are within my expertise and within the remit of my instruction. The nature of that opinion will not be influenced by the requirements of any party. I will inform the court of any matters that are outside my expertise and I understand my obligation to revise my opinion if matters are disclosed that make this necessary.

TO THE COURT

Instructing Party's Reference:

Other Reference:

At the request of M. , and on behalf of R. Solicitors, I undertook a consultation and examination of Mr T. on 4th April 2006.

Mr T. was 25 years old at the time of the accident and was employed as a vehicle technician. On 14th July 2004 at about 10am he was at work and was tidying up his work area. He was not wearing protective eyewear at the time. He explained to me that there were several pressured-air hoses that hang from the ceiling, each of which has a metal connector at the point where it joins the ceiling. He reached up to disconnect a high-pressure air-hose but the metal connector suddenly came loose from its attachment near the ceiling and struck him forcefully in the right eye. He noticed immediate pain in his right eye and the vision began to blur.

He staggered backwards and called out due to the severe pain. The vision in the right eye worsened over the next two minutes to the point that he could not make out any details. He could see some light coming from above but the rest of his vision appeared obscured by a 'red cloud'.

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A work colleague noticed him in distress and saw blood coming from his right eyelids. The colleague called the manager and then drove him to hospital.

On arrival at the Accident & Emergency Department he was seen immediately. He complained of feeling unwell and nauseous. His eyes were examined. The vision in the right eye was light-perception only while the left eye had excellent vision (6/5).The right eyelids were swollen. The cornea appeared swollen. The white of the eye was red and inflamed and there was bleeding inside the front part of the eye ('hyphaema'). The pressure in the eye was raised to 24. There was no view of the back of the eye.

He was admitted to the ward. Later that day the blood had cleared enough to allow a view of the retina. The right pupil reacted sluggishly to light. The inferior retina appeared abnormally whitened (commotion retinae). No breaks in the retina or detachment were seen. The records state that Mr T. preferred to go home, and he was discharged with instructions to remain on bedrest and return in two days. He was given dilating drops and steroid anti-inflammatory drops.

When he returned to the eye department on 16th July the vision was 6/9 in the right eye unaided, improving to 6/6 in the right and 6/5 in the left with use of a pinhole. The right eye was red but the patient felt his vision was improving.

On his return home he returned to bed and stayed there for most of the first two weeks. His right eye was very sensitive to light and therefore he kept the curtains drawn. He was unable to watch TV.

On 22nd July he was examined again and was deemed to have made a 'remarkable recovery', with no evidence of damage to the inside of the eye. The vision in the right eye was 6/6 and in the left eye was better than 6/6. He was asked to use a declining amount of steroid drops.

His next visit to the eye department was 19th August 2004. He was now beginning to complain of floaters but no flashing lights. The right pupil looked 2mm larger than the left and the iris showed an area of damage at the 6 o'clock position. Both pupils reacted normally to light and there was no sign of damage to the optic nerve. No damage was seen to the drainage structures and the pressures in both eyes were normal (12mm Hg). The retina was fully attached but a posterior vitreous detachment was present.

He was seen in the eye department on 27th January 2005. He noticed some haziness when driving at night. Both pupils reacted normally to light. There was no sign of any cataract. He was warned of an increased future risk of glaucoma, cataract, and retinal detachment.

He was seen again in the eye department on 2nd June 2005. He had also noticed an increase in floaters in the right eye at that stage. The vision was 6/6 in both eyes. Some pigmented areas were seen in the vitreous and retina but no treatment was required. He was asked to use artificial tears for surface eye discomfort. These provided some measure of relief.

He was next seen in the eye clinic on 3rd August 2005. He was noted to have a posterior vitreous detachment in the right eye. The retina showed peripheral pigmentary changes which did not require treatment. There were no retinal holes or tears. The vision was better than 6/6 in both eyes. He was discharged from the clinic.

REVIEW OF MEDICAL RECORDS

Medical records relevant to this incident have been reviewed within the first section of this report.

Review of GP records back to 1973 did not reveal any other eye problems.

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EXAMINATION

His current vision is:

Right eye: 6/8+ unaided, improving to 6/6 with a low prescription of -0.50 -0.75 x 5.

Left eye: 6/8+ unaided, improving to 6/6 with a low prescription of -0.50 -0.75 x170.

The pupils were equal and reactive to light (7mm to 5mm) with no swelling or scarring. The tear film showed rapid break-up in both eyes.

Examination of the lids and anterior segment was unremarkable, with no damage seen to the iris or drainage structures. Pressures were normal (14mm Hg) in both eyes.

Dilated examination of the posterior segment showed some iris pigment on the anterior lens capsule of the right eye, a remnant of his injury, but there was no cataract or other damage to be seen.

In the inferior retina was a C-shaped area of pigmentation next to an area of lattice degeneration. There was no sign of any break or detachment of the retina.

The heads of the optic nerves appeared healthy and well perfused.

CURRENT EYE PROBLEMS

He is still complaining of significant floaters in his right eye. These are particularly prominent on bright mornings. These do not prevent him performing daily tasks but are a constant irritation.

He suffers twitching in the right eyelids two to three times a week since the accident. He also experiences occasional itching in the right eye but no longer uses any drops for this.

WORK DIFFICULTIES FOLLOWING THE ACCIDENT

Mr T. was employed as a vehicle technician at the time of the accident. He took approximately two months off work following the accident due to his concerns about the health of the right eye. He then returned to his previous job full-time. He stayed away from dusty areas and from welding equipment for several months. He has remained in that job until the present time. He now uses goggles whenever he has to move an air-hose or use any tools.

SOCIAL DIFFICULTIES FOLLOWING THE ACCIDENT

Following the accident Mr T. stayed in his house for two weeks, mainly on bedrest. He was unable to watch TV due to pain in the right eye. He could read for short periods. He did not drive for about three weeks. He usually smokes 20 cigarettes a day but had to cut down to about 2 a day as the smoke irritated his right eye.

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Prior to the accident he went out with friends to the pub or snooker hall every evening. Following the accident he avoided social activities for about two months due to concerns about the health of his eye.

He lived alone and usually did all the domestic chores himself. Following the accident he could not do cleaning or cooking for at least a month, and his mother took care of him during that time.

OPINION

NATURE OF THE ACCIDENT

Mr T. explained to me that on 14th July 2004 he sustained blunt injury to his right eye from the metal connector of an air hose. He was not wearing any protective eyewear. He sustained injuries that are consistent with his description of events.

IMMEDIATE EYE PROBLEMS FOLLOWING THE ACCIDENT

He would have suffered immediate pain in his right eye. There was a rapid decrease in the vision of the right eye as he suffered bleeding inside the eye.

This bleeding is referred to as a ***hyphaema***, which is layering of red blood cells in the anterior chamber of the eye. This can be associated with raised pressure in the eye, as was the case for Mr T.. Fortunately the blood was reabsorbed from the eye which recovered without incident. The vision of the right eye recovered fully within 8 days of the accident.

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He suffered sensitivity to bright lights for several weeks. This would have been due to the '***traumatic mydriasis'***, which is stunning of the pupil so that it does not contract adequately to bright lights. Inflammation within the eye as a result of the trauma (*traumatic iritis*) would also have caused increased sensitivity to bright lights.

The muscles of the pupil have fully recovered and the pupil now constricts normally to a bright light.

He sustained ***commotio retinae***, an area of retinal whitening due to disruption of the light receptors of the retina. This usually recovers fully without permanent damage, as it has done for Mr T..

LONG-TERM PROBLEMS AS A RESULT OF THE ACCIDENT

He experienced multiple ***floaters*** which have persisted to the present day. This represents a detachment of the vitreous gel inside the eye.

It would be worthwhile to explain what is meant by the vitreous and its detachment, so as to aid understanding of how the accident contributed to his symptoms. The vitreous is a clear gel-like substance within the eye, which takes up the space behind the lens and in front of the retina, the light sensitive layer at the back of the eye. It is usually transparent due to the arrangement of the fibres within it in such a way that they do not catch the light. The vitreous is attached to the retina, more strongly in some places than others. When a posterior vitreous detachment occurs, the gel comes away from the retina. The fibres lose their orderly arrangement, and begin to catch the light. The vitreous becomes visible to the patient as dark lines that move around, and this is referred to as a floater. The vitreous pulls on the retina at

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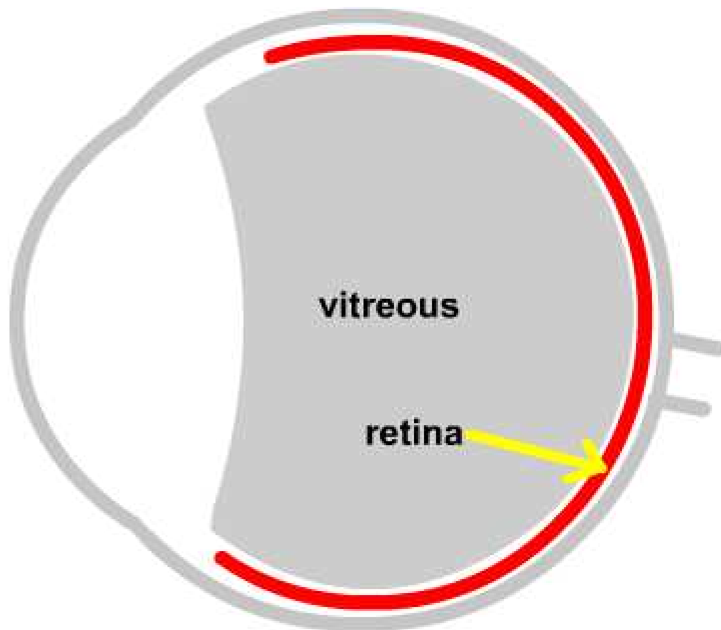
its remaining points of attachment, and the brain 'sees' this stimulation of the retina as flashes.



1. Normal young eye in which the vitreous gel fills the posterior part of the eyeball

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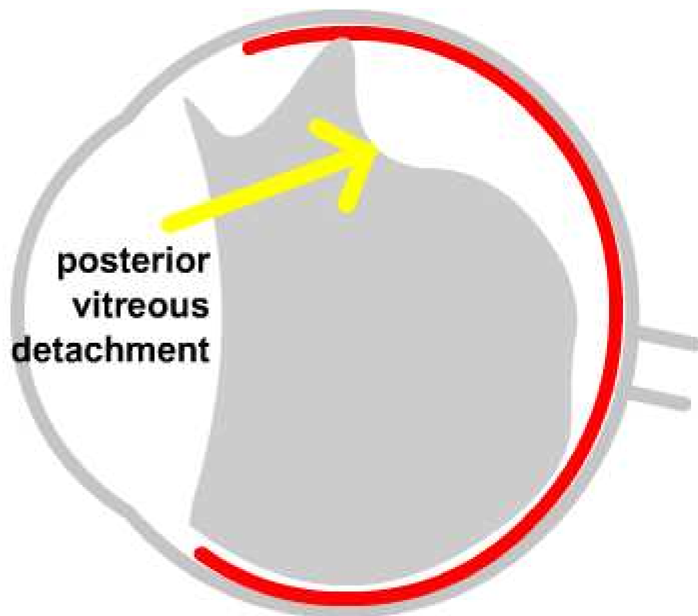
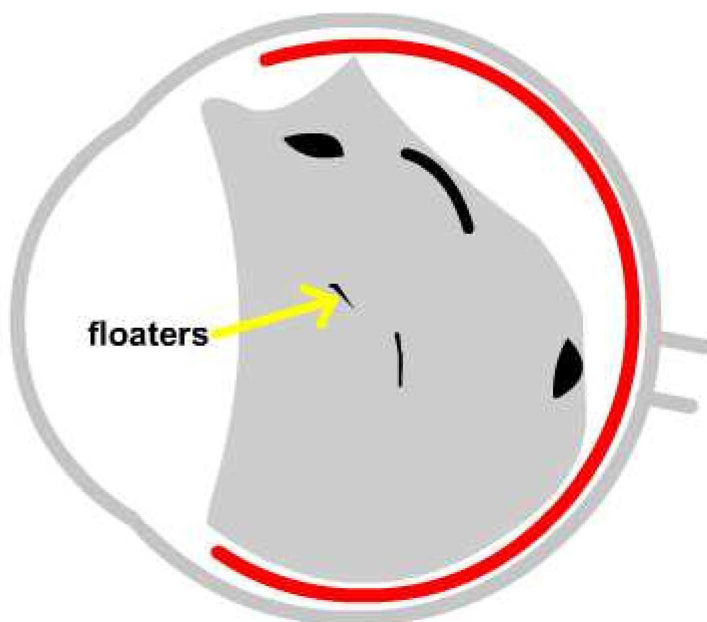


2. As a result of trauma or ageing, the vitreous pulls away from the retina. It is at this stage that the retina is in danger of tearing.



3. The condensed vitreous appears opaque and casts an image of a floater on the retina. The vitreous is mobile and so the floater tends to move.

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Mr T. had no floaters prior to the accident, and it is unlikely that he would have developed them for many years, as a posterior vitreous detachment occurs in most people (75%) by the age of 65. The temporal relationship of the accident with his development of floaters makes it likely that blow to his eye caused the floaters.

He still suffers some discomfort in the right eye. This appears to be due to dryness of the surface, which is not due to the accident as it is present in both eyes.

FUTURE RISKS:

Mr T. has been told in the past that he might face future problems with his eyes, including glaucoma, retinal detachment, and cataract, as a result of his accident. I will assess his risk for each of these in turn.

1 Increased risk for glaucoma

A blow to the eye can cause damage to the drainage structures of the eye. This is seen as 'angle recession', or a wide dark band on examination of the drainage structures. If the damage affects more than 180 degrees of the total 360 degrees of available drainage, the lack of adequate functioning drainage can cause a buildup of fluid within the eye. This raises pressure in the eye which is termed 'glaucoma'. (*Glaucoma after traumatic angle recession: a ten year prospective study, J.Kaufman and D.Tolpin, American Journal of Ophthalmology 1974 78(4) p648-655*).

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On examination at the hospital and by myself there was no sign of 'angle recession' damage. The pressures in the eyes have always been normal. Therefore he is not at risk of glaucoma as a result of this accident.

2 Retinal detachment risk

When a vitreous detachment occurs, there is a risk that the vitreous can pull on the retina and cause bleeding and retinal tears. Patients with multiple floaters, as Mr T. has, have a slightly increased risk of developing further retinal tears over time. This risk is up to 3.7% over a 5 year period. (*Symptoms and Findings Predictive for the Development of New Retinal Breaks, van Overdam et al , Arch Ophthalmol. 2005;123:479-484*).

He should undergo a yearly examination of his retina, and report to an ophthalmologist immediately if he starts to see flashes or an increased number of floaters. Appropriate laser treatment of any retinal break can then be instituted if necessary. Such treatment is effective in preventing the development of retinal detachment.

If no retinal break develops, one can expect the floaters to disappear by five years after the accident, as the brain learns to ignore their presence.

3 Cataract risk

There has been no sign of any cataract developing since the accident. There have been cases reported in the medical literature of cataracts developing up to 12 years after trauma. (*Sonographic changes of the lens in traumatic cataract, Karanjam et al, Iranian Journal of Ophthalmology June 2003, 14-17*). This is presumed to be due to microscopic damage occurring to the lens capsule, causing the lens proteins to slowly leak out over many years,

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leading to a shrivelling of the lens. The risk of this happening is below 5%. He should be advised to have a yearly eye examination, and to report to an ophthalmologist immediately if he notices any changes in his vision.

TIME OFF WORK AND IMPACT ON SOCIAL LIFE.

These have been discussed above in detail. It would have been appropriate for him to take a month off work to allow the eye to recover. It is not surprising that after a severe blow to his eye he wished to take two months and ensure that his eye had fully recovered. He now undertakes all the same duties as prior to the accident, but sensibly wears protective eyewear in all situations where the eyes might be at risk.

His future employment prospects and social life are not affected as a result of this accident.

I confirm that in so far as the facts stated in my report are within my own knowledge, I have made clear which they are and I believe them to be true, and that the opinions I have expressed represent my true and complete professional opinion.

MR MATTHEW J. STARR MD
OPHTHALMIC SPECIALIST