Ocular complications associated with bungee jumping

D B David, T Mears, M P Quinlan

Bungee jumping originated in the islands of the South Pacific as a means of initiating young males into the realms of manhood. A length of vine was attached to their legs, but today this is replaced with a bungee rope. The sport is increasing in popularity with a wide range of age groups taking part. It is reported to be dangerous, with lethal accidents caused by miscalculations of the extent to which the rope will stretch, and in one case, a jumper who forgot to attach his...

Reference:
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Figure 1 Right fundus.

Figure 2 Left fundus.

Figure 3 Right eye.

Ocular complications associated with bungee jumping and vision following non-fatal injury. Other reported complications include a non-fatal hanging injury and quadriplegia secondary to a locked facet joint. The only ophthalmic complication previously reported is that of periorbital bruising. We report a case of a man who presented with acute diminution in vision following a bungee jump.

Case report
A medically fit 31-year-old man bungee jumped, having been weighed, with an appropriate rope fastened to his feet and a harness attached to his body. He had been examined by his general practitioner 2 weeks previously and his unaided vision had been recorded as normal in both eyes. The patient jumped, head first, from a height of approximately 185 feet and he remained suspended in the air 'bobbing' up and down for approximately 1 minute. As soon as he was released from the harness he noticed that his vision was blurred.

He was seen in casualty at the eye hospital 2 hours following the jump and his unaided vision was then right 6/60, not improving with pinhole, and left 6/18, 6/9 with pinhole. The anterior segments were normal with clear media but his fundi showed scattered superficial retinal and preretinal haemorrhages and numerous cotton wool spots in the macular area of each eye. These changes were more marked in the right eye and in this eye were associated with macular oedema (Figs 1 and 2). A general examination, including a full neurological examination, was normal and investigations including full blood count, erythrocyte sedimentation rate, plasma viscosity, clotting factors, and blood sugar were all within normal limits.

When the patient was seen the following day he had developed a subconjunctival haemorrhage in the right eye (Fig 3). One week after the jump the vision had improved in both eyes to right 6/18 and left 6/6.

One month after the injury the vision was 6/6 unaided in each eye with almost complete resolution of the retinal changes apart from minimal residual haemorrhages in his right eye.

Comment
This is a previously unreported complication of bungee jumping although these complications had been expected. The retinopathy we report is typical of Purtscher's traumatic retinal angiopathy which is thought to be due to an abrupt rise of intravascular pressure in the upper portion of the body, frequently following sudden compression of the chest. It is likely that the rise in intravascular pressure is due to the sudden deceleration which occurs when the downward momentum of the bungee jumper is overcome by the tensile strength of the cord.

We would advise caution in the sport of bungee jumping in view of the reported ocular complications in an otherwise fit man.