Malignant hypertension presenting as blurred vision in a 43 year old intravenous drug abuser

G Walters, T R Dabbs

Abstract
A 43 year old intravenous drug abuser presented to the accident and emergency department with a three week history of bilateral visual loss and frontal headaches. Fundoscopy revealed bilateral retinal cotton wool spots and haemorrhages and an ophthalmic opinion was requested. His blood pressure was subsequently found to be 210/140. A diagnosis of malignant hypertension was made and blood pressure was gradually controlled on oral antihypertensives. This case illustrates the importance of checking the blood pressure of all patients presenting with visual loss.

Keywords: malignant hypertension; visual loss

Case report
A 43 year old man presented to the accident and emergency (A&E) department with a three week history of bilateral blurred vision and frontal headaches. He was a long standing intravenous heroin abuser and attended because of difficulty in seeing to inject. In his past history he had received a brain contusion injury after a road traffic accident two years previously. He had recently been found to be hepatitis C positive, although he had not received any treatment for this. He was otherwise well.

On examination in the A&E department, his vision was found to be reduced to 6/24 in the right eye and 6/36 in the left eye (normal 6/6 or
better). Ophthalmoscopy revealed bilateral cotton wool spots and haemorrhages. A provisional diagnosis of cytomegalovirus retinitis was made and he was immediately transferred to the eye department for an ophthalmic opinion. His best corrected visual acuities were confirmed. There was no afferent pupillary defect. Anterior segment examination revealed no abnormalities. Examination of the retina showed bilateral mild optic disc swelling, venous dilatation, arteriolar attenuation, cotton wool spots, and blot and flame shaped haemorrhages (fig 1). The most striking findings were the large cotton wool spots involving the posterior poles including the maculae. The differential diagnosis of this fundal picture in a patient with this history is wide but is in keeping with malignant hypertension. His blood pressure was found to be 210/140. A provisional diagnosis of malignant hypertension was made and the patient transferred under the care of the physicians for further management.

The patient was started on oral antihypertensives while other investigations relating to the differential diagnosis of the retinal picture and the cause of his hypertension were performed. Blood glucose, blood cultures, urinalysis, plasma viscosity, C reactive protein, liver function tests including plasma proteins, full blood count, auto-antibodies including ANCA, and an HIV test were all normal. An echocardiogram revealed left ventricular hypertrophy but no vegetations and computerised tomography of the brain showed extensive oedema with no focal lesions.

His hypertension gradually came under control and subsequently his vision and retinal appearances improved. Despite extensive investigations no cause for his hypertension has been found.

**Discussion**

Bilateral visual loss in a man of this age is unusual, as is malignant hypertension. The differential diagnosis of visual loss and retinal cotton wool spots is considerable, and further complicated by the history of intravenous drug abuse. The most common causes of cotton wool spots include diabetes mellitus and hypertension, but other causes include severe anaemia, vasculitis, blood dyscrasias, and infection including endocarditis. Intravenous drug abusers can develop cotton wool spots due to embolism of infected material (including fungi and bacteria) or talc, as well as HIV, AIDS, and its associated infections. A blood pressure reading of 210/140 narrows the differential diagnosis considerably.

Cotton wool spots are caused by retinal nerve fibre layer infarcts, leading to a cessation of axoplasmic flow and the accumulation of axonal material. Hypertension causes damage to blood vessels, mainly arterial, leading to obstruction and leakage from these vessels. Changes in the fundus include arteriolar attenuation, arteriovenous nipping and displacement, retinal haemorrhages, hard exudates, cotton wool spots, and optic disc swelling.

Malignant hypertension can present with heart failure, hypertensive encephalopathy, renal failure, headaches, and grade III–IV hypertensive retinopathy. Initial investigations include assessment of renal function, chest x-ray and electrocardiogram. Treatment involves strict bed rest with a gradual reduction of blood pressure, usually with oral antihypertensives such as nifedipine. Initially, chewing a 10 mg nifedipine capsule will reduce the blood pressure over 30 minutes, followed by 10–20 mg of oral nifedipine eight hourly. In the unconscious patient close control of blood pressure can be attained using intravenous sodium nitroprusside.

Despite the wide differential diagnosis and unusual presentation of this case the diagnosis was made on a simple blood pressure measurement. Subsequent extensive investigations case failed to reveal any cause for the hypertension. This case illustrates the importance of checking the blood pressure in every patient attending for visual loss.


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**Accidental ingestion of Ecstasy by a toddler: unusual cause for convulsion in a febrile child**

A J Cooper, C V Egleston

**Abstract**

The case is reported of a toddler who presented with an apparent febrile convulsion. The final diagnosis was that of accidental ingestion of Ecstasy. The child made an uneventful recovery. Ecstasy toxicity should be added to the list of differential diagnoses in a child presenting with fever and an unexplained seizure. (J Accid Emerg Med 1997;14:183–184)

Keywords: Ecstasy; toddler; accidental ingestion
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