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PICTURE QUIZ Focal neurological deficits after trauma

A 38 year old woman developed headache (without neck pain) and weakness of her left upper and lower limbs after a concussive head trauma with scalp lacerations in a motor vehicle crash. On examination (more than 4.5 hours after the trauma), she was conscious, alert, and in cardiac sinus rhythm. There was no carotid bruit. She scored 7 points on the National Institute of Health stroke scale (maximum possible score 42). Positive neurological findings included mild blunting of the left nasolabial fold; left hemiparesis, with extensor muscles being weaker (3/5) than flexors in the left upper limb (4+/5), flexors being weaker (4 to 4+/5) than extensors in the left lower limb (4+ to 5/5), and distal more than proximal weakness in the left arm and leg. She also had brisk deep tendon reflexes in the limbs on the left side; a left extensor plantar response; left hemianopia; and left hemisensory (including the face) hypoaesthesia for pain, cold, and touch. Eyelid ptosis or paresis of extraocular movements were not present, and pupillary size and light reaction were normal.

She had no history of hypertension, diabetes, cigarette smoking, polyarthritis, stroke, or cardiac disease. Plain computed tomography of the brain did not detect acute parenchymal or extraparenchymal injury. In view of her persistent left hemiparesis, she underwent cranial magnetic resonance imaging (fig 1A-E) and computed tomographic cerebral angiography (fig 1F) two days after the trauma.

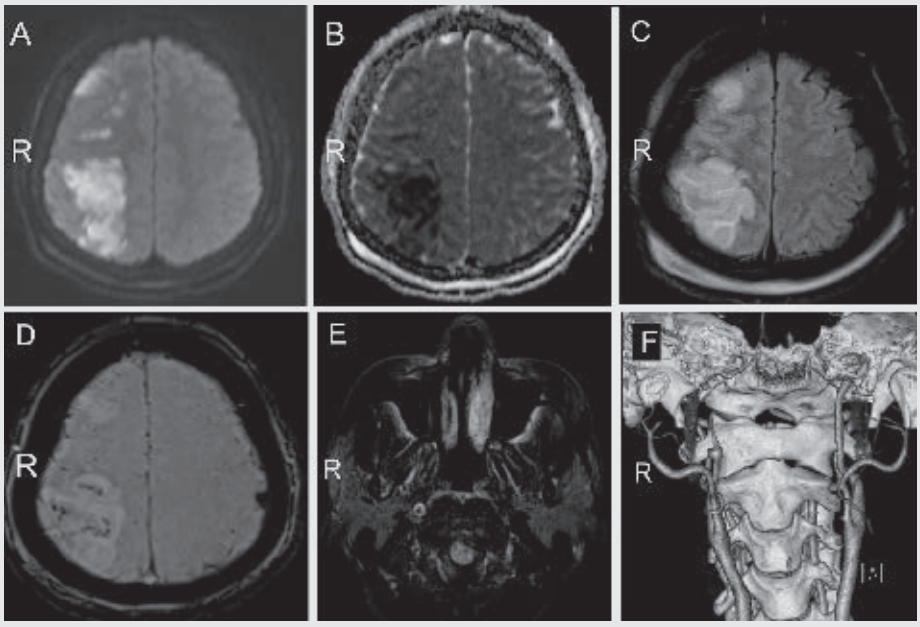

Fig 1

1. What abnormalities are shown in the figure?
2. What caused her focal neurological deficits?
3. How would you manage this condition?

Submitted by R Nandhagopal

Patient consent obtained.

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STATISTICAL QUESTION What are randomised consent designs?

Researchers investigated whether an off-site transitional care facility provided a safe alternative to usual care for elderly patients in acute hospital beds awaiting transfer to a residential long term care bed. When elderly patients are admitted to hospital, they often need time to recover. Therefore, if the transitional care facility provided a safe alternative, hospital bed space could be freed. A randomised controlled trial study design that incorporated a randomised consent design was used. The intervention was transfer from an acute hospital bed to a transitional care facility to await a long term care bed, with patients receiving a single assessment from a specialist elderly care team and appropriate ongoing treatment. The control treatment was for the patient to remain in hospital with usual care provided.

Eligible patients were invited to participate in a four month follow-up study that involved routine observation of their healthcare. In total, 320 patients (mean age 83 years) agreed to participate. After recruitment, participants were randomised without their consent to treatment groups in a 2:1 ratio (212 to the intervention, 108 to the control). Once randomised, patients allocated to the intervention group were approached again for consent to transfer to the transitional care facility to await long term care. A total of 44 (20.8%) patients declined the intervention and received usual care instead. Those allocated to receive usual care were not approached again.

The main outcome measures included length of stay in hospital, rates of readmission, and death. Analysis was by the principle of intention to treat. It was reported that the intervention group spent less time than the control group in hospital (median 32.5 *v* 43.5 days, 95% confidence interval for difference 6 to 16). The intervention group took longer than the control group to be admitted to permanent care (median difference 21 days, 6 to 27). There were no significant differences in death rates (28% *v* 27%) or rates of transfer back to hospital (28% *v* 25%). It was concluded that for elderly patients awaiting a residential care bed transfer out of hospital, an off-site transitional care unit that focuses on aged care "unblocks beds" without adverse effects.

Which one of the following randomised consent designs best describes that used in the trial above?

a) Double consent

b) Single consent

Submitted by Philip Sedgwick and Carwyn Hooper

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