NEUROLOGICAL PICTURE

Cerebellar swelling and massive brain stem distortion: spontaneous resolution documented by MRI

A 47 year old banker had a sudden onset of vertigo, slurred speech, vomiting, and hiccups. On neurological examination he had a maximal Glasgow coma scale, flaccid dysarthria rotary nystagmus, and right dysmetria. Intermittent drowsiness prompted the placement of a ventriculostomy in an outside hospital. No neurological deterioration occurred, and at

morning rounds he was alert and reading the *Wall Street Journal*. He was rehabilitated but left the hospital walking with a cane and fully independent. The figure shows MRI on admission and 7 days later.

MRI imaging is helpful in delineating brain stem compression from the mass effect of cerebellar infarction. The demonstration of such MR findings may potentially influence the decision to proceed with occipital craniotomy. This case re-emphasises the adage that clinical presentation should preside over neuroimaging studies.

Left row: upper image: MRI on admission (T1 weighted image). Sagittal view showing a swollen cerebellar mass from infarction with effacement of the fourth ventricle and prepontine cistern. The superimposed line is drawn from the anterior tuberculum sellae to the confluence of the straight sinus, great cerebral vein of Galen, and inferior sagittal sinus. (The iter of the aqueduct is usually located on this horizontal incisural line but is displaced upwards from herniation.) Left row, middle image: the cerebellar tonsils have herniated below a line through the foramen magnum drawn from the inferior tip of the clivus to the posterior tip of the occiput. Left row, lower image (T2 weighted): distortion of the medulla oblongata. MRI right row seven days after presentation: similar landmark lines showing relocation of the iter on the incisural line, resolution of hydrocephalus, and revisualisation of fourth ventricle and prepontine cistern. The cerebellar tonsils are slightly below the foramen magnum line; complete recoil of the brain stem.

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