Contralateral selective saccadic palsy after a small haematoma in the corona radiata adjacent to the genu of the internal capsule

Contralateral saccadic palsy with ipsilateral conjugate deviation of the eyes is usually attributed to lesions involving the frontal eye field (FEF) or connections with that area coursing through the internal capsule. The lesions are usually so large that they cause obtundation and contralateral hemiparesis. Pathological confirmation of the lesions confined to the FEF or its connections has not been reported. We report a case of contralateral selective saccadic palsy with neither clauding of consciousness nor limb weakness after a very small haematoma in the corona radiata adjacent to the genu of the internal capsule.

A 50 year old woman developed acute dysarthria whilst in hospital for a broken leg. After defaecation, she had developed speech disturbance, immediately followed by right facial droop. Blood pressure was 160/100 mm Hg and pulse 90 minutes. On neurological examination, she was alert and cooperative. Her eyes deviated upwards and to the left but she was able to follow slowly moving targets in either horizontal direction. Optokinetic testing with targets moving to the patient's right evoked a normal nystagmus response but the eyes deviated tonically into an eccentric leftward position with the target moving to the left. She had minimal right lower facial weakness and mild paretic dysarthria. She complained of difficulty in swallowing liquids, and palatal and pharyngeal weakness was present on the right. There was no deviation of the tongue on protrusion. Facial and buccal sensation were normal. Motor, sensory and cerebellar functions were normal in the limbs except for the following signs of subtle corticospinal damage: when the fingers were stretched out voluntarily, abduction of the fifth finger (a digitis quinti sign of Alter) and adduction and flexion of the first metacarpal (a hollow hand sign of Garцин) were noted on the right side. Muscle strength of the legs was probably normal. Tendon reflexes were normal with flexor plantar responses.

A CT scan revealed a round hyperdensity, of approximately 7 mm diameter, located in the left corona radiata adjacent to the genu of the internal capsule, suggesting a small haematoma (h). Her oculomotor disorder disappeared within two weeks. Two months after the stroke, neurological examination was normal.

Our patient presented contralateral selective saccadic palsy and contralateral supranuclear facio-palato-pharyngeal paresis, but no weakness of the tongue and limbs.

According to recent anatomical studies in monkeys, the major pathway from the frontal eye field descends in or slightly ante-rior to the genu of the internal capsule near the caudate head. The very restricted lesion of our patient suggests that the descending pathway from the FEF in humans may pass through the genu of the internal capsule in parallel with the corticobulbar tract.

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Figure 2

Figures 2 and 3 The MRI sections (TR 2,800, TE 80) at the level of the basal ganglia and cerebral peduncle respectively demonstrate high signal intensity in the right lentiform nucleus, the anterior limb of the internal capsule and some extension into the posterior limb of the internal capsule. High signal intensity is demonstrated in the right cerebral peduncle extending from the red nucleus anteriorly to the surface of the peduncle. The appearances are typical of an infiltrating multifocal tumour.


CT scan shows a round hyperdensity in the left corona radiata adjacent to the genu of the internal capsule.

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