EXTRADURAL HAEMATOMA FOLLOWING VENTRICULOPERITONEAL SHUNTING

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Introduction

Ventriculoperitoneal shunting is a common neurosurgical procedure usually not associated with major complications other than technical or mechanical failures. Reports of extradural haematoma (EDH) following surgical procedures are occasionally encountered in published literature. Most standard textbooks on neurosurgery do not mention EDH as a complication of ventriculoperitoneal shunting. The authors report two such instances of EDH following ventriculoperitoneal shunting.

Case report

A 30-year-old soldier reported with progressive bi-frontal headache and blurred vision over two months. Clinical examination revealed no neurological deficit except bilateral papilloedema. Cranial CT revealed aqueductal stenosis with hydrocephalus.

The patient underwent a right sided VP shunt on 05 May 95. There was no sudden decompression. Recovery from anaesthesia was complete. Six hours later he became comatose (E₁V₁M₅). An urgent CT scan done showed bilateral extradural haematomas in

the right parietal and both frontal regions. Coagulation parameters repeated showed no coagulation disorders. EDH were evacuated by bilateral craniotomies. The patient recovered with mild paresis of the left arm.

Case 2

Thirty-two-year old soldier was admitted with a three month history of generalised headache. Fundoscopy showed papilloedema. Presence of aqueductal stenosis with hydrocephalus was confirmed on CT Scan.

He underwent a right sided VP shunt on 12 Feb 97. The post operative recovery was complete but found to have altered sensorium (E₁V₁M₅) with left hemiparesis the same evening. Possibility of an EDH was considered and he was taken up for surgery after confirming the absence of coagulation abnormalities. He was re-explored on the side of the burr hole which revealed a large extradural haematoma. Post procedure recovery was complete and uneventful.

Discussion

Extradural haematoma following ventriculo-peritoneal shunting is an unusual event. In a large review of postoperative haematomas in neurosurgical practice Palmer reported only two cases of EDH following VP

Fig. 1 : Bilateral extradural haematoma with VP shunt catheter in left cerebral ventricle

Fig. 2 : Right frontal extradural haematoma

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shunting [1]. The same report also documents an EDH incidence of 63% following aneurysm surgery where a spinal drain was used. Extra dural haematomas have been reported following ventriculoatrial shunting [2] and simple procedures like drill hole aspiration of arachnoid cysts[3]. EDH was a known complication following ventriculography, an investigation of the pre CT era, with a high mortality and morbidity resulting from failed recognition [4].

Factors implicated in the causation of EDH are:

- a)sudden decompression of the cerebrospinal fluid
 - b)unrecognized coagulopathy
 - c)easy separability of the dura from the cranium in young adults
- With the availability of CT scanners, early recogni-

tion of postoperative EDH should not be a problem as long as the possibility of this rare but easily curable complication is kept in mind.

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