

SURGICAL OUT COME OF PATIENTS WITH EXTRADURAL HEMATOMA AT THE DEPARTMENT OF NEUROSURGERY IN CHITTAGONG MEDICAL COLLEGE HOSPITAL: A STUDY OF 30 PATIENTS

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Abstract

Bleeding of extradural space is called extradural haematoma. This was a prospective study which was done from April 2006 to April 2007 at the Department of Neurosurgery, Chittagong Medical College Hospital. We have studied 30 patients of extradural haematoma. Out of 30 patients 28 patients were treated by surgical procedure and two were treated conservatively. Among the 30 patients 26 were cured completely after surgery. Postoperatively one patient had visual field defect, one had psychological disturbance and one had hemiparesis. One patient died on 3rd post operative day and one on 6th post operative day due to aspiration pneumonia. Mortality and morbidity were more among those who were operated after 48 hours of occurrence. So this study revealed that the early surgery is more life saving than the late surgery.

Key words: extradural haematoma; Glasgoo Coma Scale; pupillary dilatation; computerized axial tomography.

Introduction

Incidence of extradural hematoma (EDH) is 1% of head trauma and sex ratio of admitted patient is 4:1 (male: female). It usually occurs in young adults and is rare before age 2 years or after age 60 years. Perhaps because the dura is more adherent to the inner table in these groups¹. Death usually occurs due to respiratory arrest from uncal herniation causing injury to the midbrain. CT scan of brain is the investigation of choice. Treatment is craniotomy and evacuation of haematoma². Extradural haematoma have their classical presentation:

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I. Brief post -traumatic loss of consciousness. II. A lucid interval for several hours. III. Obtundation, contralateral hemiparesis, ipsilateral pupillary dilatation³.

Shift of the brain stem away from the mass may produce compression of the opposite cerebral peduncle on tentorial notch which can produce ipsilateral hemiparesis (so called Kernohan's phenomenon or Kernohan's notch phenomenon) a false localizing sign⁴. CT scan findings of extradural haematoma is are - in 84% of cases high density biconvex (lenticular) shape adjacent to the skull. In 11% the side against the skull convex and that along the brain in straight, and in 5% it is crescent shape (resembling subdural hematoma)⁵.

An extradural hemorrhage often caused by a skull fracture during childhood or adolescence. This type of bleeding is more common in young people because the membrane covering the brain is not as firmly attached to the skull as it is older people⁶.

Materials and methods

This was a prospective study, which was carried out from April 2006 to April 2007 at Department of Neurosurgery in Chittagong Medical College Hospital, Chittagong. A structured questionnaire was made. Data were collected after patient admission. Proper history was taken and clinical examination was done. CT scan findings were revealed extradural haematoma. They were operated and close follow up were done.

Results

	Age	Percentage	No of Patients
1.	1-20 yrs	33.3%	10
2.	21-40 yrs	50%	15
3.	41-60 yrs	13.3%	4
4.	61 yrs and above	3.3%	1

Table I : Distribution of patients by ages (N=30)

Sex	No.	Percentage
Male	25	83.3%
Female	5	16.6%

Table II : Sex distribution of patients (N=30)

	Occupation	No	Percentage
1.	Day laborers	10	33.3%
2.	Service holder	6	20%
3.	Farmer	5	16.6%
4.	Professional	5	16.6%
5.	House wife	4	13.3%

Table III : Distribution of patients by occupations (N=30)

	Causes	No	Percentage
1.	Day laborers	10	33.3%
1.	Road Traffic Accident	21	70%
2.	Assault	7	23.3%
3.	Others	2	6.6%

Table IV : Causes of injury (N=30)

		No	Percentage
1.	GCS 8 and less	10	33.3%
2.	GCS 9 - 13	15	50%
3.	GCS 14-15	5	16.6%

Table V : Glassgo Comma Scale (GCS) of patients during admission (N=30)

		No	Percentage
1.	GCS 8 and less	10	33.3%
1.	Pupillary dilatation	15	50%
2.	Other Cranial Nerve Palsy	5	16.6%
3.	Speech disturbance	5	16.6%
4.	Upper limb weakness	15	50%
5.	Lower limb weakness	15	50%
6.	Deep tendon reflex exaggerated	10	33.3%

Table VI : Neurological deficit of patients during admission (N = 30)

		No	Percentage
1.	GCS 8 and less	10	33.3%
1.	Temporal	8	26.6%
2.	Fronto-temporo-parietal	15	50%
3.	Parietal	4	13.3%
4.	Bilateral	2	3.3%
5.	Others	1	3.3%

Table VII : Site of extradural haemorrhage (N=30)

	Per operative	No	Percentage
1.	Cured	26	86.6%
2.	Improvement with residual neurological deficit	2	6.6%
3.	Death	2	6.6%

Table VIII : Out come of the patient after surgery (N=30).

Discussion

This prospective study was done in Chittagong Medical College Hospital from April 2006 to April 2007 at the period 12th months, to find out the outcome of surgery of extradural hematoma. Age group of patient were more in the range at 21-40yrs 15(50%). Sex distribution were more in male patients. Day laborers were more prone to EDH. This study showed road traffic accident are the commonest cause of EDH 21(70%). Neurological deficit were more at limb weakness and pupillary dilatation in this study. Commonest site of EDH at fronto-temporo-parietal region 15(50%). 28(93.3%) patients were treated surgically. Outcome of surgery revealed that 26(83.3%) patients were cured and 2(6.6%) died post-operatively, 2(6.6%) had residual deficit. Regarding the timing, those who were operated earlier, cured completely. Those who operated after 48 hours, 2 died and 2 had neurological deficit. Optimal diagnosis and treatment within few hours results in 5-10% estimated mortality (12% in a recent CT era series)¹⁰. Bricolo et al showed mortality figure of five percent in 107 patients¹¹.

Fig 1 : Right fronto parietal extradural haematoma

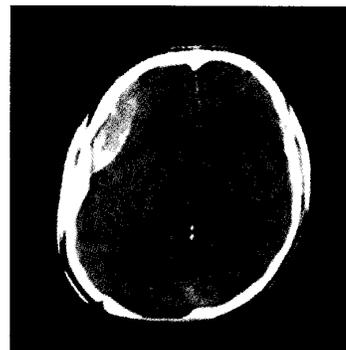
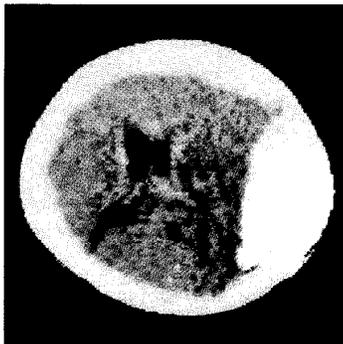
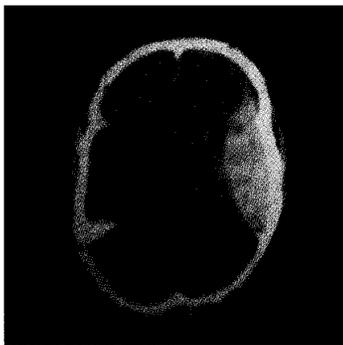


Fig 2 : Left frontal extradural haematoma**Fig 3 :** Left parietal extradural haematoma**Fig 4 :** Left fronto-temporo-parietal extradural haematoma**References**

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Conclusion

This study revealed early surgery in patients of extradural haematoma life saving and late surgery results increase mortality and morbidity.