DEPRESSED FRACTURES OF THE SKULL
THEIR SURGERY, SEQUELAE AND DISABILITY
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IN A SERIES of fifteen hundred cases of head injury under observation over
a period of time varying from one to fourteen years, 111 were depressed
fractures of the skull. Certain principles, based upon the experimental
work of Naffziger and Glaser, were followed in their treatment. The pur-
poses of this paper are: (1) to ascertain the final outcome of this type of
treatment with relation to the sequelae, and (2) to analyze the cases as to
the effects of the injury.

The problem of treatment of depressed fractures consists specifically of:
(1) the advisability of elevating the depressed fracture (Fig. 1); (2) the
restoration of the cranial defect (Figs. 2, 3 and 4); and (3) prevention of
infection.

With the results of the above-mentioned experiments in mind, it was de-
cided to adopt the following principles in the treatment of clinical cases of
depressed skull fractures:

1. To avoid elevation of simple and compound, rounded non-spiculated
depressions confined to silent areas of the brain.
2. To avoid elevation of simple and compound fractures in which a
large segment of bone was separated, but hinged at one side, and in which,
as is usual in fractures of this type, the depth of the depression was not great,
if not situated over the motor area.
3. To elevate simple and compound rounded depressions over the motor
area.
4. To elevate the fragment in all cases of spiculated fractures.
5. To elevate in all cases where uncertainty existed as to whether spicu-
lation was present.

RESULTS

The results in the series of 111 patients treated may be divided as fol-
loows: (1) Complete recovery, 45 patients (40.5 per cent); (2) Partial perma-
nent disability, 30 patients (27.0 per cent); (3) Total permanent disability,
22 patients (19.8 per cent); (4) Fatality, 14 patients (12.6 per cent). A per-
manent disability was considered present when either the subjective com-
plaints or the objective neurological findings persisted over a period of five
years. These people were classified as partially disabled when they were
unable to assume a complete return to their former occupations, but could
carry out modified work. They were considered totally disabled when they
were unable to perform any wage-earning activity.
Fig. 1. If one decides to perform a block dissection, the rotary precision cranial saw described elsewhere facilitates the speed and ease of the surgery.

The ages of the patients in the entire series may be noted in Chart I.

COMPLETE RECOVERY

Of these 45 patients, 12 (26.7 per cent) were not rendered unconscious (Chart II). Denny-Brown and Russell have pointed out that in cases of a small area of impact with penetration of the skull cerebral concussion will not take place, even though local contusion or laceration of the brain occurs. In penetrating the skull the force of acceleration is much reduced and the small area of impact focalizes the effects of the injury. These clinical cases