BONE PLASTIC FOR SKULL DEFECTS.

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At the Rangoon General Hospital, where cases of compound depressed fracture of the skull are exceedingly frequent, it often becomes necessary to remove large areas of bone. The result of such removal is often to cause large depressed pulsating scars, and several such cases having come under my observation years after operation, caused me to adopt the following curative procedure.

A Burman, aged 32, was admitted to hospital with a sinus discharging sanious pus and leading down to necrosed bone on the right side of the head, over the mid-parietal area. The sinus opening was situated anterior to a depressed pulsating scar, 3 inches long by 1 inch broad, the appearance being unsightly. He complained of slight headache and giddiness and said he had been subject to fits of convulsions every two or three months since the injury, two years previously. He had been operated on for a large compound depressed fracture of the skull caused by a heavy sword-cut about two years before.

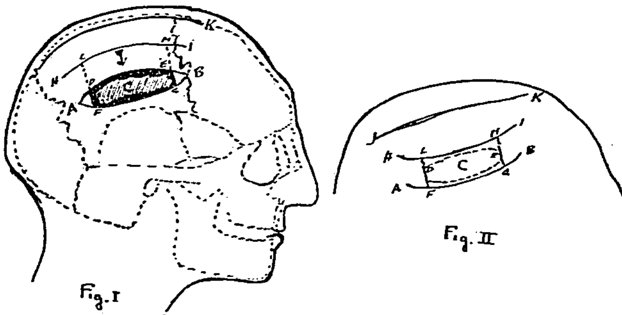
The following operation was devised so as to make a bone flap contiguous with its nutrient supply, to cover over the hole in the skull and to correct the deformity.

Two semilunar incisions *A, B,* around the depressed scar *C,* were made so as to excise the whole of the scar tissue and the sinus leading down to dead bone.

The small piece of necrosed bone, together with the irregular edges of bone, were removed with Hoffmann's bone-cutting forceps and care was taken not to evert the skin flap edges or separate the layers of tissue and periosteum from the bone. A semilunar incision *H,I* was made one and a half inches from and parallel to the semilunar incision *A,B* down to the bone and the bone was cut with a Hey's saw between *L* and *M,* so that *L,M* was equal or slightly longer in length to the edge of the hole in the skull

C. After making a slight cut into the outer table of the bone from *L* to *M* the Hey's saw was turned flat and the outer table of the bone split in half by sawing in the area *L,M,P,E.* Similarly, the outer table of the skull along *P,E* was sawn to meet the sawing from *L,M.* Care was taken not to separate the skin incisions or to allow the periosteum to be injured.

With a narrow chisel the outer table of the bone was cut along *L,P* and *M,E,* and the chisel introduced to finish off and separate the sawn-off portion of bone from the bone below. Thus a flap of bone containing the outer table of bone with its periosteum attached and all the tissues above was separated from the



bone below, and then the whole flap *H,I,A,B,* containing underneath it the quadrilateral piece of bone was slid down to cover over effectually the exposed area *C.* And the quadrilateral area of bone being very slightly larger than the opening in the skull, it could not sink down into the cavity *C.* A still longer incision, *J,K,* into the skin and subcutaneous tissues only was then made to form a skin flap to close the area left by the sliding down of the bone flap, and it was found that the three incisions *J,K, H,I,* and *A,B* could be united with sutures without dangerous tension.

The wound healed by first intention and the man was shown at the local branch meeting of the British Medical Association; he had no deformity, no headache or giddiness, and six months after this operation he had had no recurrence of fits.