

the tibia; the dead bone showing itself about an inch below the tuberosity of the tibia, and at other points to about two inches above the ankle-joint. There was constant discharge from the leg, hectic fever, and other constitutional symptoms. Several months after he had been admitted into the Asylum I made up my mind to remove the necrosed bone. After I had commenced the operation, I found the dead and new bone so intimately connected, and my patient's strength sinking, I then thought that it was best to remove the whole bone, which I accompanied by sawing it through just below the tuberosity, and about two inches above the malleolus, and dissecting out the bone. There was but little hemorrhage, and notwithstanding a rather severe attack of small-pox, which set in a short time after the operation, the wound healed by granulation. For the last few months the boy has been learning the trade of a shoemaker, and has walked about with the aid of a crutch, and when not watched, without it."

On close inspection of the specimen but two points were seen where the bone had failed in its reproductive efforts, and one of these was about an inch above the internal malleolus, and the other about an inch and a half above the middle of the shaft. From the superior articular surface of the tibia to a distance of six inches there is a continuous formation of bone. Although the amount of bone reproduced was very considerable, Dr. Sands still regarded the specimen as illustrating the truth of the conclusions arrived at by the German experimenters, viz., that in cases where the periosteum was removed there the effort at restoration was very imperfect. He did not think that in the case under consideration the reproduction would have been any more complete.—*American Medical Times.*

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#### REPRODUCTION OF BONE.

Mr. Hamel read before the Academy a series of cases of regeneration of bones. Of the five cases I come to submit to the appreciation of the Academy, four, said he, are mine. The periosteum, as formative and regenerating organ of the osseous tissue, has obliterated a large perforation of the frontal bone, reproduced the right half of the lower jaw, the greater portion of an ulna, a portion of the body of a femur, lastly, almost the whole of a tibia.

At the time when osseous regeneration seemed a dream, although it had been the object that led Mr. Flourens to his researches on the periosteum, a man, 36 years of age, came to consult me for a perforation of long standing, near the left frontal eminence. The hole was nearly circular, large enough to pass the thumb through it but thickset with asperities. There existed as a consequence of this, a hernia of a portion of the brain and of the dura-mater. I advised him to apply permanently a piece of leather on the hole. Several years elapsed, the hernia at last completely disappeared. I had lost sight of the man, although we lived in the same city, when I was requested by the civil authorities to certify to his death—he had died from superficial cerebral hemorrhage, the result of a violent blow with the fist received in a fight. I remembered his old infirmity, and examined carefully the cranial cavity. To my great surprise, I found a whitish periosteal membrane of new formation, uneven, rather thick, of a cartilaginous appearance, applied on the dura-mater to which it adhered towards its centre. It was situated in front of the frontal perforation, whose rounded shape it had, and to which it must have been abruptly attached. The gradual but entire occlusion, the only admissible cause of the complete disappearance of the cerebral hernia, could not be but the result of a slow and reparative process. How it did take place would be difficult to explain. However it be, nature has shown, in this circumstance, how far her resources and her generative power can go.

In the second case (a necrosis of almost the whole of the left lower maxillary bone), the restorative power of the periosteum became apparent from the moment that the work of insulation was ended. The necrosed bone was entirely reproduced, the teeth only