

were wanting. The angle of the jaw remained less projecting, more receding; it gained in width and thickness what it lost in height.

A short time after this cure, a muleteer, 28 years of age, came to me with the left forearm rather painful and twice the natural size. In the middle of the suppurating wound, seventeen and a half inches in length (fifteen centimètres), stood half bare the necrosed body of the ulna. A fall from a horse, violent enough to produce at first an enormous and painful swelling, had induced a fistulous abscess about the lower third of the ulna, where its denudation took place. When I probed the ulcer, it was red, hard, and granulous. Although very extensive already, the two extremities of the bone were not visible. As it was movable at one point, I sawed it with a small, convex, watch-maker's saw, then with the circular saw of the trephine. The lower fragment detached itself a few days after, breaking into two. The fall of the upper fragment took place only three weeks later. On examining the external surface of the periosteum, rugose and bleeding, I perceived that this membrane had become three times thicker and had acquired a strong consistency. Three months had hardly elapsed, when the patient, notwithstanding an imperfect cicatrization, used his forearm, whose volume was still larger than that of the other. The shape of the new ulna, where regeneration had taken place for a length of nine inches (eighteen centimètres), varied also in some parts. This twofold osseous reproduction is so much more remarkable that it took place in a country, the habitual hygienic conditions of which were very unfavorable to this reparative process.

Pierre Ravult, 14 years old, fell from a horse in April, 1859. This was soon followed by a deep fistulous abscess along the internal part of the right leg. At the end of nine months a fistulous tract left bare the necrosed tibia, and the first ulcer healed. When he came to consult me, in August, 1860, his leg was in a frightful condition, it had doubled in volume. The anterior portion was occupied by a deep ulcer with everted edges. The principal bone necrosed to the extent of ten and a half inches (twelve centimètres), was prominent in its middle, isolated from the soft parts, and saturated with a fetid and abundant pus.

The preservation seemed to me at first an utopia. I flinched at first, however, at the idea of amputating. After mature reflection I decided on waiting. The strength of the patient, instead of failing, had improved. To a vast local suppuration, disinfected by chlorine, was opposed an assimilation sufficient to replace the everyday losses. I favored it by the use of barks, wine, and ferruginous drinks, cod-liver oil, with iodine and a reparative animal diet. Under such conditions, and always preoccupied with an idea which, as it seemed to me, could be realized, I resolved on cutting, with the saw, on the projecting part of the denuded bone, as far as the medullary canal, and dividing it in three parts. I was in hope to render the fragments more movable, and to insulate them sooner from the periosteum, the reparative work of which I was afraid they might retard. The natural irritability of the subject, the capricious irregularity of the digestive organs, the too often repeated capillary hemorrhages, arrested my efforts, and answered but imperfectly the end I had proposed to myself. However, after the fall of two thick fragments, situated at the opposite extremities, the body of the tibia detached itself in its turn from its two articular epiphyses. From that time, January, 1861, the reparative process, long begun, pursued its progressive march; the osseous woof spread soft and spongy as it became more solid. I discovered no trace of a new medullary canal. I could study the metamorphoses which the new bone underwent until its entire development, as much in its aspect, its color, the saturation of its tissue, its gradual thickening, as in its greater force of consistency, always increasing, and more marked than before. There truly is revealed to the eyes of the observer the important part which nature has assigned to the periosteum.—*Dr. Derlandes in American Medical Times.*