

leave absolutely nothing more to be desired. The following points are gained 1, perfect union, 2, perfect restoration of the perineum, 3, no loss of substance, and 4, no after fever worthy of the name.

Sketch 3 shows the condition of the parts at the completion of the operation.

### TETANUS FROM TOOTH EXTRACTION—RECOVERY.

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On the 26th March, W. P.—, æt 30, called at my office to have a tooth extracted. The tooth was the first molar in the lower jaw, right side. He stated it had been aching for two weeks, and he thought it was ulcerated. He said he had slept very little for several nights previous, owing to the pain; and otherwise expressed himself apprehensive of the result. Upon adjusting the tooth forceps and tightening my hold I found the tooth was extremely tender, and upon attempting to draw the tooth, the patient moved his head, thereby causing the forceps to slip, breaking the tooth, one root remaining firm in the socket, the front root coming half out, when the tooth broke leaving the root in a twisted position, pointing outwards, but still quite firmly fixed in the socket. The patient appeared to suffer intense pain, and drew his breath in deep, violent and spasmodic gasps. He also complained of stiffness in his hands, especially the right, and I now perceived that the fingers and thumb, though quite straight, were drawn together at the extremities and appeared to be quite stiff so as to oppose all motion, either voluntary or passive, as though partially frozen. On trying to open his hand the resistance was similar to that in a muscular cadaver during the rigor motis. He also complained of a similar stiffness in his feet. With a fresh pair of forceps I extracted the root which was raised in the socket, after which he said the pain in the head was much easier, but the stiffness of his hands and feet did not abate. The tooth was extracted at 1 p. m. A gentleman who happened to be in my surgery, and myself, hastened to apply vigorous friction to the affected hands and feet, with decided improvement, so long as the friction was continued, but on ceasing the friction, the stiffness advanced rapidly up the arms and legs, invading the muscles of the chest, causing ex-

tremely labored respiration. I administered chloroform at 1.25, but it did not appear to arrest the rapidly advancing rigidity, while the irritation of the vapour on the lining of the bronchial tubes excited spasmodic contraction of the bronchial muscular fibres, so that respiration resembled that of a typical case of asthma. As these means failed, I administered ether, one drachm in three drachms of alcohol, diluted with water, and injected  $\frac{3}{4}$  grain of morphia, while vigorous friction with whiskey was continued on the patient's limbs, which, despite our utmost efforts were rapidly becoming more rigid. The friction undoubtedly retarded the progress of the spasms as the patient expressed himself feeling better and having less stiffness in the limbs when the friction was freely applied. The character of the spasms was throughout, one of tonic rigidity with exacerbations. An exacerbation would commence in the hands and feet and rapidly travel up the limbs in a wave-like manner toward the trunk. In the trunk the muscles of the back were principally affected. The neck also was drawn forcibly backwards, which, together with the contraction of the muscles of the back, gave the typical appearance of opisthotonos. During two of the exacerbations respiration was entirely suspended, owing to the complete rigidity of the muscles of the thorax, so that the patient lost consciousness by apnoea. The heart also appeared to be implicated by the spasm, as the pulse ceased to beat during the acme of his most violent attack, in which his hands were so firmly clenched that an assistant who was engaged in rubbing one of the patient's hands—felt his hand almost crushed by the vice-like contraction of the patient's fingers. Another assistant, a powerful and heavy man, was lifted off his feet by a spasm affecting the lower limbs. At this time, about 2 p. m., the rigidity invaded the muscles of the jaws so that they were several times firmly locked, while the patient remained perfectly conscious. During the remissions, the patient complained of numbness and stiffness of the hands and feet and in a less degree of the legs, with stiffness of the jaws; but with these exceptions, throughout the whole attack, the patient's senses were perfectly clear and his mind collected, except when almost suffocated by the extreme rigidity of the muscles of the thorax. The spasmodic contraction affected the muscles of the eye to such an extent that the