

but sometimes all the muscles of the leg and foot. Sometimes, indeed, the muscular structure is wanting, and fibrous and adipose tissue supply the place.

Dr. Little believes "that the deficiency or atrophy and degeneration of muscles is in a precise ratio to the extent of the deformity, and the earliness of the uterine existence at which the deformity is produced."

Mr. Adams was impressed with the inadvisability of allowing the deformity to continue, when he said: "The longer the deformity remains uncured the less will be the ultimate size of the muscles of the leg, and, therefore, on this account, I strongly advise early operation."

The ligaments at birth give little or no trouble; but soon after birth they sometimes offer serious obstacles to the removal of deformity. They adapt themselves to the abnormal position of the bones, becoming thinned and lengthened where the tension is greatest, and perhaps contracted where it is least.

Many of the bones are altered in position, if not in form; notably the calcis, which may early assume an oblique position; and the astragalus, which is tilted forwards and downwards.

Time will not permit me to speak of the other tarsal bones, but this much I shall say, that the changes observed in the tarsal bones are changes of position rather than of form; and the changes of form, ultimately observed, are due largely to long-continued faulty position.

To come back, then, to the question: When should the operation be performed? I regret to observe so great a diversity of opinion among those so competent to speak. Formerly I shared the opinion of Mr. Lizars, who taught that "two or three years of age is that at which the division should be attempted." Mr. Lizars said he preferred "three years." Others preferred the beginning of the second year, when the child has learned, or is learning to walk. Dr. Little, who had submitted to the operation at the hands of Stromeyer, thought not under six or eight months. Mr. Syme, when the patient could run about, as he was permitted to do on the second or third day.

I have come to regard all this advice as erroneous. Why wait till the muscles have become atrophied, perhaps changed in structure? till the ligaments are thinner at one edge, thicker at the other? till the cartilages are partly changed? till the plantar fascia, becomes contracted, which at first is usually but little? till the facets of the bones are changed? and the position of the bones themselves permanently altered?

When, then, should the operation be performed?

Gentlemen, there are two operations in surgery which should, methinks, be performed before the child has been seen by its mother, before, in fact the infant has had an hour's breathing existence; the one, the operation for hare-lip—the other that for club foot. The satisfaction I may have had from performing these operations has been in proportion to the early period at which they had been performed; for I have found that the earlier the more successful, and the more successful the more satisfactory.

Having disposed of this part of the subject, there is another question of much moment in the operative treatment of club foot. Tenotomy is performed—what, then? Should the foot be at once extended and kept extended after tenotomy or not? I have asked two questions at once; but shall answer them separately. As to the first, the foot should be at once extended to enable us to ascertain if the division already performed suffices for the removal of the deformity; and that ascertained—notwithstanding the advice of Miller, Syme and Gross to the contrary—I should, unless in exceptional cases, urge gradual extension as did Stromeyer and Delpech. I spoke just now of exceptional cases; by these I mean those somewhat unusual cases in which, after the division of the faulty tendon or tendons, the foot can be carried easily back, not only to its normal position, but much beyond.

I purposed saying a few words on the order of division of the tendons in the various forms of club foot, but Mr. Adams has left nothing to be said on this part of the subject. I can, therefore, but echo what he has said. Even this much, however, is foreign to my purpose, which was and is to urge upon you not to delay the performance of tenotomy in cases where the operation is clearly indicated; but to operate at the earliest possible moment. An American surgeon, Mr. Sayre, I think, said that the accoucheur is not warranted in delaying longer than is necessary to wash his hands before operating! This is scarcely an exaggeration, though it may appear as such. I should be generous enough, however, to allow the accoucheur time; but no more, to look over his anatomical plates and to see what to divide and what to avoid; or to invite the co-operation of a confrère more familiar with the work than himself.

CASES IN PRACTICE.

Communicated by Dr. Carr H. Roberts, of Salisbury, England, &c., &c.

E. Edwards, æt. 41, admitted into sick ward of Union House, 3rd June, 1875, thin, spare, tall, has