

reduction of temperature, co-existing with muscular contraction and mal-position.

The muscular shortening in joint diseases is well known to careful observers, but its pathological character has as yet not been fully appreciated by the profession. In carefully analysing the facts in the premises, I shall encounter no difficulty in establishing views fully consistent with the nature of the symptom in question.

1st. I have already adverted to the influence of the reflex pain upon certain muscles appertaining to the affected articulation, setting them into a most agonising quiver. This symptom is, indeed, so common, that its peculiarities may be ascertained beyond a shadow of doubt.

2nd. When these muscular spasms subside, they leave its structure in a state of rigor, or stationary retraction and tenderness, which, however, gradually disappear, if no new spasms set in.

3rd. Every attempt at elongating the so retracted muscle, by gradual extension, is very painful, and not rarely it is resisted by returning spasms.

4th. Faradayism renders the state of so retracted muscles still more tender, and not seldom gives rise to greater and painful shortenings of the muscular belly.

5th. During anæsthesia the muscular retraction relaxes and allows full extension, which, in some instances, may be successfully perpetuated by appropriate appliances. In others, the retraction re-appears with the cessation of the anæsthetic effect; the muscle remains tender and jerking. If, under these circumstances, the extension be persisted in, the articular disease becomes aggravated.

6th. Persistent retraction terminates in structural changes of the muscle, and destroys its expansibility, both physiologically and experimentally. Faradayism produces scarcely any excitation whatever, and chloroform anasthesia exercises no marked influence upon its tension. Thus the muscle, having attained its maximum of contraction, and that contraction being rendered permanent by organic changes of its structure, the term *contracture* has been fitly applied to that condition.

Dr. Benedict, of Vienna, maintains that a constant galvanic current possesses the power not only to reduce the contraction, but to establish the physiological expansibility of muscles so affected. I have, however, not seen a single case at his clinic in the general hospital of that city that could be accepted in proof of his views.

Nor can the successful *brisement forcè*, without myotomy, pass as evidence, since the violence generally employed is quite sufficient to tear asunder all resisting structures—myolemma or muscular fibres—thus