

DUGAS (L.A.)

Report on a new principle
of diagnosis in dislocations
of the
Shoulder-joint.



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REPORT

ON A

NEW PRINCIPLE OF DIAGNOSIS IN DISLOCATIONS

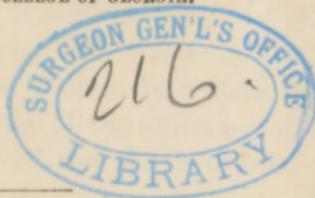
OF THE

SHOULDER-JOINT.

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THE PRINCIPLE OF DIAGNOSIS IN PNEUMONIA

REPORT

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R E P O R T .

HAVING for a number of years inculcated in my lectures the principles contained in this paper, I was requested to reduce my views to writing, for the benefit of our classes, and accordingly published an article on the subject in the March number, for 1856, of the *Southern Medical and Surgical Journal*, p. 131. The object of this communication is to present the American Medical Association with a brief exposé of this interesting subject, and to accompany my remarks with pictorial illustrations, calculated to impress the eye as well as the understanding of the reader.

The principle of diagnosis to which I refer may be enunciated in the following language: If the fingers of the injured limb can be placed by the patient or by the surgeon upon the sound shoulder, while the elbow touches the thorax, *there can be no dislocation*; and if this cannot be done, there *must be* a dislocation. In other words, it is *physically impossible* to bring the elbow in contact with the sternum or front of the thorax if there be a dislocation; and the inability to do this is *proof positive* of the existence of dislocation, inasmuch as no other injury of the shoulder-joint can induce this inability.

In order to make these propositions apparent, I beg leave to present drawings taken from the skeleton, showing the relative position of the bones in the natural state, and in the several dislocations of the shoulder. The evidence thus obtained in support of my principle, would be still stronger if the bones were invested with their normal coverings and attachments.

Let us then look at Fig. 1, and we may observe, that while the head of the humerus occupies the glenoid cavity, and the fingers rest upon the other shoulder, the elbow and lower end of the humerus lie upon the thorax without difficulty, because of the circumstance that the head of the humerus, when in its natural position, is removed several inches from the ribs. In consequence of

the rotundity of the thoracic walls it is physically impossible that both ends of the humerus should at the same time come in contact

Fig. 1.



with the chest. We see, therefore, in Fig. 1, that in the absence of any dislocation, the *upper half* of the bone does not touch the thorax, and that the *lower half* does so without the least difficulty.

Fig. 2.



By now referring to Fig. 2, which represents a dislocation into the axilla, we find that, the fingers being placed upon the opposite

shoulder, the elbow is forced so far forwards that it *cannot* touch the thorax. In this state of things, the upper end of the humerus alone touches the ribs, while the lower end is proportionately removed from the chest. Any attempt to force the elbow against the thorax must be fruitless, unless at the expense of a disruption of all the soft parts by which the head of the humerus is held down; for, as I have already stated, it is *physically impossible* for both ends of the humerus to touch the thoracic walls at the same time.

We have represented, in Fig. 3, a dislocation forwards or below

Fig. 3.



the clavicle; and here again we find the *upper end* of the humerus resting upon the ribs—the elbow being consequently removed from the chest. The *upper* half of the humerus touches the thorax, and so long as this is the case, it is physically impossible for the *lower* portion of the humerus also to do it. In dislocations of this kind, it is very difficult to carry the fingers upon the opposite shoulder, even though the elbow be allowed to project forward, because of the resistance offered by the strong muscles which pull back the humerus. I have, however, represented the bones of the skeleton in this position, for the purpose of showing the effect, in case it could be assumed, in the living subject.

Dislocations of the humerus upon the dorsum of the scapula, although very rare, should still be carefully studied. I have, there-

fore, represented this accident in Fig. 4, by which it may be seen that the same principles are applicable also to it. Here, as well as

Fig. 4.



in the other instances, it is only the *upper end* of the humerus that touches the thorax, and the elbow projects strongly forwards. In this dislocation, it might be possible to bring the elbow against the side of the trunk, by carrying the humerus down parallel with the axis of the body; but any contact of the elbow with the chest is impossible, if the fingers be directed towards, or placed upon the sound shoulder, for then the form of the thorax would offer an insuperable obstacle.

Having now, I trust, sufficiently demonstrated the truth of the proposition that it is *physically impossible* to bring the elbow against the front of the thorax in dislocations of the shoulder, I would simply add, that it is equally true, that no other injury of the shoulder-joint than a dislocation can induce this physical impossibility. It is obvious, that a mere contusion of the soft parts may render motion of the joint so painful as to deter the patient from the effort necessary to carry the fingers upon the other shoulder. But there can be no difficulty on the part of the surgeon in placing the limb in this position, and an anæsthetic might be used, if desirable, so as to render manipulation painless. The same may be said of fractures of the upper end of the humerus, of the acromion, of the coracoid process, and of the neck of the scapula. In neither of these accidents can there be any physical impediment in the way

of bringing the elbow in contact with the front of the chest, for in neither of them can the *upper end* of the humerus be so fixed against the ribs as to make it impossible for the *lower end* to touch the chest. Nothing, therefore, but a dislocation can prevent the limb from being placed in the position indicated.

If it be justly esteemed a matter of great importance to be in possession of correct principles of diagnosis in occult diseases, it is certainly not the less so with regard to surgical accidents, especially when these demand prompt interference. Our professional records unfortunately establish too conclusively the imperfection of our diagnostic resources in injuries of the joints, to permit any indifference on the subject. If, therefore, the views here presented may facilitate, in the least degree, the detection of injuries confessedly more or less obscure, my object will have been attained.

AUGUSTA, GA., April 25, 1857.

