

very tense; isolated axillary glands infected, but the tumour remains movable on the muscles. Smaller cysto-sarcomata are diagnosed by the lobulated surface, with scattered areas of fluctuation, mobility, and sharply circumscribed periphery. At a very early stage the sharp circumscription and the lobulated surface serve to distinguish this variety.

In younger women, small, sharply circumscribed, elastic, and extremely movable *adenomata*, often multiple, may be found either at the margin of or in the substance of the mammary gland.

TUBERCULOSIS of the breast is not as rare as was formerly supposed. A superficial, tubercular ulceration of the skin may be seen quite often, but tubercular foci, embedded in the gland, are of much rarer occurrence. Such a node appears irregular and hard at its surface, but nevertheless shows deep fluctuation. At this spot the colour of the skin is a dirty violet. The axillary glands are swollen, not hard, shotty, and small, but enlarged, ovoid, fluctuating, or even suppurating. Other signs of tuberculosis may be present.

A cold abscess, due to a tuberculous rib, situated behind the left breast, may project toward the interior of the thorax as well as toward the surface. As the deeply placed part may lie in close proximity to the heart, a distinct impulse may be communicated to the whole swelling.

## CHAPTER XIV

### INJURIES OF THE SHOULDER

THAT there still are physicians who are unable to recognise a simple DISLOCATION OF THE SHOULDER is incomprehensible to me. The slightest experience, and the knowledge of the normal position of the head of the humerus, compared to its position when luxated, should suffice to prevent errors.

There are other injuries of the shoulder which may cause some doubt to the beginner, for whose sake the following account is necessary. I have seen more than two hundred dislocations of the shoulder, and in more than half of these I have noticed in what fashion the beginner undertakes to make his diagnosis. I may say that in those cases in which an average student hesitates to make the diagnosis of a dislocation, it is really absent, so plain and so striking are the findings.

A skilled practitioner will at once suspect some severe injury to the shoulder when a patient enters the room with the head inclined to one side and supporting the injured arm with the healthy one. If the patient has stripped to the waist, we glance at the position of the arm and the direction of the long axis of the humerus. In the forward (preglenoid) and the downward (subglenoid) dislocation—these will be the only ones we shall discuss—the arm is abducted, and the long axis

of the humerus, which normally passes through the joint in every position of the limb, will now pass to the inner side of the articulation, and, if prolonged upward,

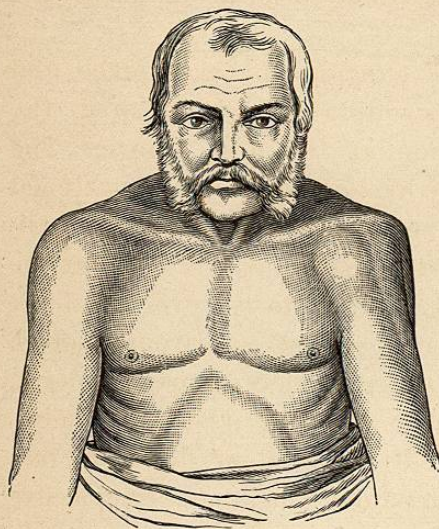


FIG. 4.

intersects the clavicle. In thus following the axis of the arm upward, our glance strikes the infraclavicular fossa. This either appears somewhat fuller than normal at its outer aspect, or a flat protrusion may be noted if the head of the humerus rests beneath the coracoid process. Observing this prominence, we examine it

as a matter of course. The mass proves to be hard and rounded, and takes part in the passive movements of the upper arm. It therefore can be nothing but the head of the humerus. If the head does not appear at this spot, but is more deeply situated in the axilla (subglenoid or axillary dislocation), it is well to palpate below the acromion, pressing the finger-tips deeply inward. If the roundness of the shoulder has been lost, the dislocation can be diagnosed at a glance; but if the patient is stout, or considerable blood has extravasated, the shoulder may be as full as the healthy one. By deep palpation, as indicated above, the hollow under the acromion is demonstrable. This shows that the head has left its normal site and must now be

sought by examination of the axilla. If the fat or the effusion is so great that we are left in doubt, we can test for mobility. The dislocated limb is held stiffly, and attempts to bring the elbow to the trunk meet with marked resistance.

In recent cases, before effusion has taken place, and in old cases, after the swelling has disappeared, the diagnosis should be made at the first glance. The change in direction of the axis of the limb, the flattened shoulder, the flat prominence along the anterior axillary wall are so striking and so closely related, that the condition is unmistakably evident to the eye. And yet I make it a rule, in recent cases, to palpate before making a diagnosis, in order to determine one point. In some dislocations the head, after its displacement, is separated from the shaft. We must therefore test whether the head accompanies the shaft on passive movement. All signs of a dislocation may be plainly present, the above examination show that no fracture of the neck has taken place—and yet there need be no dislocation. For a fracture through the neck of the scapula sometimes occurs in such a way that the glenoid cavity forms the outer, smaller fragment. The whole arm accompanies this portion of the bone, the head remaining in the glenoid cavity, and the limb falls or comes to rest in a position which simulates a dislocation. The arm is, so to speak, dislocated upon the trunk, but it has carried its articular cavity along with it. This condition also can be diagnosed. By grasping the upper end of the arm and lifting it outward, the normal outline of the shoulder is at once restored; but as soon as the arm is released the deformity recurs. Or we may take a dislocation for granted, per-

form the usual manipulation for reduction, and be surprised by the ease with which it is accomplished. The deformity, however, reappears at once, and after each succeeding attempt. Frequently there is also a transverse fracture of the body of the scapula, which can not be recognised, or a fracture of the acromion. The latter can be diagnosed by obtaining a false point of motion by exerting firm pressure upon the tip of the acromion. It might be objected that this diagnosis is very incomplete, or rather not a diagnosis, for the true state of affairs is not recognised until attempts at reduction show that no dislocation is present. Can the condition be recognised earlier? If the dislocation occurs in lean subjects, the edge of the empty glenoid can be felt behind and below the spine of the scapula. Where this can be made out, fracture of the neck of the scapula may be excluded.

In the foregoing no distinction was drawn between positions of the head below the coracoid process or in the axilla. The difference is of but little practical importance, as the symptoms differ only very slightly and the methods of reduction not at all. Any one making the diagnosis of dislocation will at once be able to state which variety has to be dealt with. If the head is directly beneath the coracoid, it is a *preglenoid* or *subcoracoid*; if the head is not here, but in the axilla, the luxation is of the *infraglenoid* variety.

The rarer *intracoracoid* (subclavicular) dislocation is characterized merely by the fact that the head of the bone is to the inner side of the coracoid, below the clavicle. It can be seen and palpated. The symptoms do not differ.

The *retroglenoid* (posterior, subspinous) dislocation is

extremely rare. It is marked by inward rotation of the limb and prominence of the head at the back of the shoulder below the spine of the scapula (Fig. 5).

The *luxatio erecta* of Middeldorpff can not be mistaken. The upper arm is almost vertical, and rests

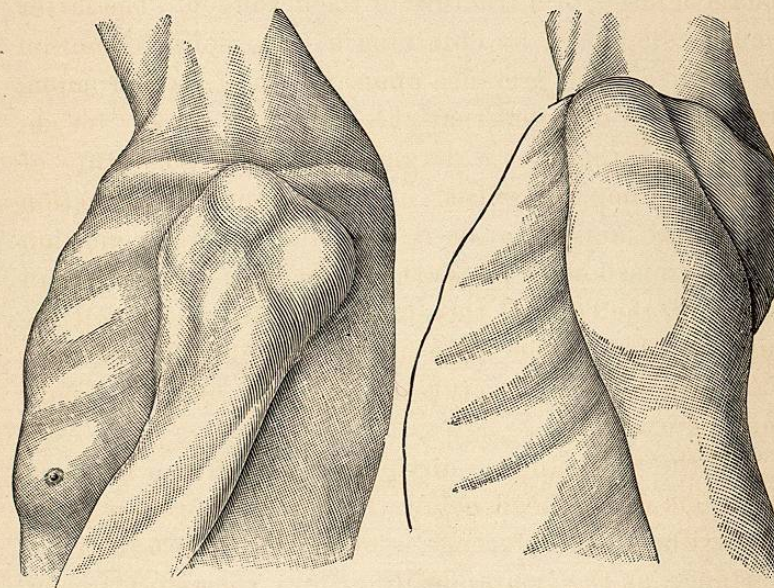


FIG. 5.

FIG. 6.

against the patient's head. The head of the humerus is in the axilla.

One of the rarest varieties is the *upward* dislocation. The head of the humerus lies above and between coracoid and acromion (Fig. 6).

The diagnosis is not complete without giving an account of the possible complications. Autopsy has shown that in all dislocations of the humerus a fragment is torn from the greater tuberosity. It may, however, happen that a large fragment is broken from the outer side of the head. The question then arises, whether the con-

dition should be called a fracture with dislocation of the one fragment, or a dislocation complicated by the tearing off of a large piece of bone. The diagnosis can be made if we find a movable fragment in the region of the joint, below the acromion. Reduce the dislocation, and then call the condition anything you please.

Another complication is a simultaneous fracture of the clavicle. This can not occur until the force, which continues to act, has dislocated the arm.

Further complications are tearing or bruising of the nerves. These are diagnosed, in the later course, by the neuralgic pains, the areas of anæsthesia, and the motor palsy which they produce.

If a single symptom is alone considered, and the whole diagnosis based upon this, a dislocation may be thought of, even if the existing condition is entirely different. The flattening of the shoulder consequent to *atrophy of the deltoid* misleads many, and causes them to speak of a dislocation, or, as they hesitatingly put it, a subluxation of the shoulder. I have witnessed many such mistakes. Palpation below the acromion shows the head in place. The atrophy of the deltoid does not appear suddenly, whereas a dislocation does. The musculature covering the joint on the affected side is much thinned out.

Deviation of the axis of the humerus, as described under dislocation, will cause some to insist on the diagnosis of dislocation, even if a fracture is at the bottom of the trouble. In FRACTURES of the surgical neck, especially if the line of fracture runs from above and within downward and outward, the lower fragment assumes such a position. The shape of the shoulder is not changed, but that, as has already been said, can happen

even in dislocation. A timid examiner, who fears to palpate beneath the acromion, will not know whether the head is in place. Such persons should bear in mind that the dentate edge of the lower fragment can be felt in the axilla or through the fibres of the pectoralis, and can be mistaken for nothing else. The angular outline shows that a rough fragment of bone, and not the rounded head of the humerus, pushes the soft part forward. At times the skin is almost perforated by the bone. A dislocation is naturally not thought of if the arm hangs helpless and adducted. The question then resolves itself into whether a fracture of the arm, in the vicinity of the shoulder-joint, or a simple contusion, exists. Crepitus is a symptom of much value, and the position of the crepitus—i. e., of the line of fracture—is important. If exact measurement is practicable, and no shortening has taken place, an oblique fracture of the neck is not likely, but a transverse separation is probable. This is verified by finding that the head does not accompany the shaft in its rotatory movements. This manœuvre is not always easy, and if the joint is swollen it may prove impossible. Even after the swelling has disappeared, several examinations will be needed in order to say definitely "*e pur si muove.*"

In children, *ceteris paribus*, the line of fracture passes through the epiphyseal line. This causes cartilaginous crepitus, and, according to Pitha, a peculiar position of the arm, with the elbow drawn somewhat backward.

The outer tuberosity may be torn away. This can be recognised, if palpation, immediately below the acromion, shows that the head moves with the shaft

in rotation, but, at the same time, a part of the bone to the outside of the joint and below the acromion does not accompany movements of the shaft. Active inward rotation is possible, but outward rotation is not.

In old people the insertions of the external rotators alone may be torn from the tuberosity. The function is disturbed as above, and only a small, movable fragment of bone can be felt.

More detailed directions for examination can not be given. At the time that a swelling obscures the joint, dislocation, at least, must not escape notice. In suspected fractures a more accurate diagnosis may be left *in suspenso*; it will not harm the patient. Certain forms of fracture it is impossible to recognise. Gurlt mentions rare cases in which fragments were broken from the head within the joint, and one case in which the head had separated and turned so that its cartilaginous surface was in contact with the lower fragment.

*Fracture of the clavicle* can ordinarily not be overlooked. Even if the characteristic inward and forward droop of the shoulder were not recognised, the line of fracture on the subcutaneous clavicle can be palpated; and if more than one fragment has to be dealt with, this also is evident. In children, in whom transverse subperiosteal fractures occur, and in fractures close to the acromial end of the clavicle, the line of fracture can not be distinguished. In these cases, in addition to local pain on pressure (often slight ecchymoses), pain is elicited at the same spot by movements of the arm or of the clavicle, if this is grasped at the sternum and moved. Moreover, the arm can not be actively raised.

I have seen beginners in doubt between a *dislocation*

*of the clavicle at its acromial end* and fracture, when the first condition had to be dealt with. This hesitation is partially justified if the acromial end is dislocated upward and, as is always the case, backward. Measurement will show that the distance from the edge of the sternum to the acromial end of the clavicle, which projects under the tightly stretched skin, corresponds exactly to that of the opposite side. Palpation will show that the projecting bone is not sharp and serrated. Dislocation *beneath* the acromion is harder to distinguish. Careful palpation is needed. The acromion is found to project boldly at its inner side, and the clavicle is lost beneath the projection. Fractures of the coracoid process of the scapula must be diagnosed by abnormal mobility and crepitus. Nothing further can be added.

Hocheneegg has called attention to an interesting fact. When the long (scapular) tendon of the biceps is torn through above, the muscle contracts down upon itself, its belly shortens, and the upper region appears flatter and emptier than normal.