

but the measurements named will suit an ordinary case; the lead wire encircling the lower end, gives a foundation to the general means of support, and keeps the testis within the suspending bag, the patient can mould it more or less to his convenience. Of course, as in every appliance of the kind, a certain amount of discretion must be used as to wearing of the suspender for the first few days; it should not be kept on constantly; the parts should be sponged night and morning with cold water or a cold lotion, used so as to fortify the skin, as any chafing must be avoided—in all cases the suspender is best omitted at night. So great is the convenience afforded that the gentleman from whose case the illustration is taken is now shooting in Scotland, able to enjoy himself and go through a day's hard walking without inconvenience, the suspension of the testis affording him such relief.

An hospital case treated during the summer also shows the great adaptability of this method—the patient being a railway porter, and in the habit of carrying heavy weights, yet he is able, by aid of the suspender, to pursue his business without inconvenience. In another instance of a groom, in the habit of riding, a similar relief was speedily obtained.

In cases of specific orchitis I have also found the suspender give immediate relief, the testis being first wrapped round with lint steeped in tinct. opii—the bag is gently and neatly applied, and then raised by means of the straps, after one hour or so it may be a little more raised, till finally it is vertical. The relief from pain in most cases is immediate, and the compression is equable, the weight of the testis is taken off by the “suspending” sac, which should always be made of web or some open-worked material to allow of coolness and prevent any unnecessary irritation or chafing of the skin.

ART. XV.—*Rare Form of Luxation of Acromial End of Clavicle, Upwards and Backwards.* By PHILIP BEVAN, M.D., T.C.D., M.R.I.A.; Fellow and Professor of Practical Anatomy, Royal College of Surgeons; late Surgeon to Mercer's Hospital.

JOHN M'DONNELL, aged fifty-nine, he looks older, and is much emaciated, a coal porter, admitted into Mercer's Hospital on 8th of May, having received severe injuries from a fall into the hold of a vessel on the quay. He states that he has had a stiff right elbow

joint for many years, and has constantly suffered from cough and asthma.

He is now suffering from extreme dyspnea, which, according to his own account, is frequently even worse than at present, whenever he gets a fresh cold. His face is livid, and extremities cold; pulse 120, small and weak; he complains chiefly of pain in the right shoulder, on examining which, the following symptoms were observed:—The point of the right shoulder was one inch nearer to the mesial line than the opposite; the acromial end of the clavicle was thrown obliquely upwards and *backwards*, two fingers breadth above the superior edge of the spine of the scapula, where it rested on the super-spinatus muscle, and there formed a remarkable projection, best seen from behind. The right shoulder seems a little higher than the opposite one; the usual depression above the clavicle is absent; the anterior edge of trapezius was tense, and formed a prominent ridge from the occiput to the shoulder; the depression below the clavicle was also absent, or rather filled up, partly from the dragging on the deltoid and pectoral muscles, and partly from the entire shoulder being thrown forwards and inwards. The spine and acromial process of scapula can be distinctly felt through their entire extent, slightly depressed below the level of the opposite side, but otherwise unaltered. The clavicle, being raised two fingers' breadth above the spine, does not interfere with its outline. The clavicle moves most freely on the slightest motion being communicated to the arm, and the entire shoulder is closer to the ribs than natural. The following measurements were taken with great care, the arms being allowed to hang freely by the side:—

*Measured from Before.*—From the sternal end of the clavicle to the point of the acromial,  $7\frac{1}{2}$  inches on sound side,  $6\frac{1}{2}$  on injured side.

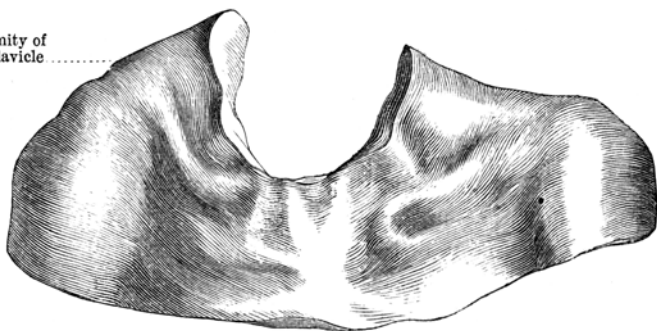
*Measured from Behind.*—From superior posterior angle of scapula to posterior end of clavicle,  $3\frac{1}{4}$  inches on sound side,  $2\frac{3}{4}$  on injured side.

I attempted to measure accurately the distance from the extremity of the clavicle to the spinous process of dorsal vertebræ, but found it to vary so much on the slightest alteration in the position of the arm as to be of little value.

His right eye and side of the face were considerably contused, as was also his right thigh and right side of the chest, and the skin over the right clavicle, proving distinctly that he must have fallen

forward. He can give little account of the accident, but that he fell against the keelson of the ship.

Extremity of  
the clavicle .....



Three forms of dislocation of the acromial end of the clavicle are described by authors:—1st, Upward, or upwards and outwards, the most frequent, the only one seen by Sir A. Cooper; this may be either partial (a very common accident) or complete. 2nd, Under the acromion. 3rd, Under the coracoid, a very doubtful accident. I would add a 4th, upwards and backwards, of which this is a specimen. I do not believe that this can be *correctly* classified with any of the others. No case of a similar nature is described in any English or American work, except one in Dr. Hamilton's most valuable work on fractures and dislocations. He says, that a Mr. B. had his clavicle thrown upwards and backwards, but in that case there was a partial dislocation of the sternal end of the clavicle at the same time. However, Malgaigne describes four cases, but he considers it a modification of the luxation upwards on the acromion process. It appears to me to differ from the latter in several essential points:—

1st. In it the clavicle is thrown upwards and backwards, not merely outwards above the acromion.

2nd. The extremity of the clavicle does not rest on the acromion, but is raised considerably above the spine of the scapula.

3rd. The clavicle is thrown backwards, and its extremity is, therefore, best seen behind and not from without.

4th. The force to produce it must be applied in a different direction. In order to produce the luxation outwards, the force must be applied to the shoulder, *i.e.*, laterally, or, in some cases, "rather on the back than the extremity of the shoulder;" in fact, the force must be applied to the acromion or shoulder, whereas, to cause the

luxation backwards, the force must be applied to the clavicle itself, and on its anterior aspect.

5th. The manner of diagnosing the luxation outwards could never apply to this case, as Sir A. Cooper says:—

“The easiest mode of detecting the accident is to place the finger on the spine of the scapula, and to trace this portion of bone forwards to the acromion, in which it ends; the finger is stopped by the projection of the clavicle, and so soon as the shoulder is drawn back the point of the clavicle sinks into its place, and it reappears when the shoulders are let go.” Now, obviously this could not apply to the present form of luxation, as the spine of the scapula was quite free throughout, the point of clavicle being raised above it; therefore, we could trace the spine of the scapula without ever meeting the clavicle. The effects of the two forms of luxation will, I believe, be very different; in the former a good use of the extremity is always obtained, even when the bone is not restored to its position, as the end of the clavicle becomes firmly connected to the spine of the scapula; but in the latter case no such result could be expected, as the clavicle does not remain in contact with bone, and simply rests on the super-spinata fascia under the trapezius.

This accident must always be of rare occurrence, as the outer third of the clavicle is so much protected by the projection of the shoulder, that the latter is sure to meet the force and to cause fracture of the clavicle, unless, as in the present instance, the clavicle comes directly on some projecting body in such a way as not to strike the acromion at the same time.

#### *Points of Diagnosis*

<i>Between luxation outwards</i>	<i>And Luxation upwards and backwards.</i>
1st. Clavicle directly outwards.	Clavicle upwards and backwards.
2nd. Clavicle rests on acromion.	Clavicle placed above spine of scapula.
3rd. Extremity of clavicle seen from before and without.	Extremity of clavicle seen from behind.
4th. Cause—A force applied to acromion or shoulder from without	Cause—A force applied to clavicle from before.
5th. Results—A useful member.	Results—Complete loss of power.

In the present case the accident seems to me to be easily explained, the man, having a stiff and unused elbow-joint, did not put forward the arm to save himself, and came with his full force on the entire of his right side, as is proved by the many contusions observable on that side, while his clavicle came directly on the

kelstron of the ship. Had he put out his hand, probably, the clavicle would have been broken, and had the point of the acromion or shoulder come against the kelstron, the luxation outwards would have resulted; but, as the clavicle came directly against the projection, it was thrown backwards, and then the action of the muscles carried the shoulder inwards.

I attempted to reduce the luxation, and could accomplish it, by placing my knee between his scapulæ and drawing the shoulders back with my entire strength, but to keep them in that position, even for a few minutes, was completely impossible, from the difficulty of breathing under which he had previously laboured. However, I very much doubt whether even a person whose respiration was healthy could endure the amount of force necessary to resist the action of the serratus magnus, and the two pectoral muscles, &c., by which the shoulder was carried forwards and inwards; besides, the peculiar position, the amount of displacement is remarkable in this case; in other luxations of this joint, the displacement is rarely more than half an inch; in one case only, Hamilton found it three quarters of an inch over-riding the acromion; but in this the displacement must have been carried to the extent of one inch at least.

An extremely doubtful point of some interest is the state of the coraco-clavicular ligaments (conoid and trapezoid), in most complete luxations, no doubt they must be torn; but on making experiments I find that the clavicle can be placed nearly in the position of this luxation, merely by a twisting of those ligaments.

*N.B.*—I make no apology for continuing the old method of nomenclature, although it is certainly more philosophical to consider all these cases as dislocations of the scapula, as has been proposed by Skey, Maclise, &c.; but the alteration of names lead to such confusion, that I believe more inconvenience arises from the change than would compensate for the greater correctness of the new terms.

ART. XVI.—*The Treatment of Club-foot by Direct Extension.* By JOLLIFFE TUFNELL, Esq., F.R.C.S.I., M.R.I.A.; Surgeon to the City of Dublin Hospital; Examiner in Surgery, Royal College of Surgeons in Ireland, &c., &c.

A WRITER upon orthopedic surgery<sup>a</sup> remarks that “the practitioner, in the exercise of this art, should be, as far as possible, independent of extrinsic aid.” The means which I am about to advocate duly fulfil this end.

<sup>a</sup> Dr. Little.