

cle are attached to this portion, it is more fixed than the longer, inner portion; (2) it is here that the two curves of the bone meet; (3) because of the change in the form of the bone, whereby the flattened, outer part blends with the cylindrical-shaped, inner portion. For these reasons, then, the direction and force of the vibrations are changed at this point, and the check to their onward course causes, in all probability, an expenditure of energy, which shows itself in the production of a fracture.

Deformity.—The inner fragment is slightly *elevated* by the sterno-mastoid overcoming the combined actions of the clavicular portion of the pectoralis major, the subclavius muscle and the resistance offered by the rhomboid ligament; whereas, the outer fragment, and with it the point of the shoulder, is drawn downwards and inwards and is rotated forwards. It is displaced, *downwards*, through gravity, assisted by the action (1) of the pectoralis minor on the coracoid process; (2) of the lower costal portion of the pectoralis major on the humerus, and (3) of the latissimus dorsi on the humerus. *Inwards*, by the pectoralis major and minor; by the rhomboidei and the levator anguli scapulæ; by the middle fibres of the trapezius and by the latissimus dorsi. *Forward rotation* takes place because of the action of the serratus magnus, which, normally, swings the point of the shoulder forwards through the circumference of a circle, the centre of which is the sterno-clavicular articulation (the radius of the circle being the clavicle); hence, if this radius be broken, the circle, described by the clavicle, will be less, so that the point of the shoulder moves forward, while the inner portion of the clavicle remains stationary (Fig. 1). Fractures of the clavicle, dependent on direct injury, are generally transverse, whereas, those due to indirect force are, as a rule, oblique and directed, generally, downwards and