

which is in all respects its superior. Again, no relations, surgical or otherwise, are given to the parts described; while in no instance is a function assigned to any muscle, membrane, or nerve. These omissions present objections to those who believe that simplicity of statement and an early recognition on the part of the student of the uses of organs are important features in teaching. But they are errors of omission only, not of commission. We find the author at all times at ease with his subject; and it would, we conceive, be a difficult matter to state the same number of facts with equal conciseness and perspicuity in a smaller space.

Appended to the Dissector is a chapter, suggested by an interesting article by Luther Holden, in 2d vol. *St. Bartholomew's Hospital Reports*, entitled "Important Anatomical Landmarks and Points, capable of being Studied without Dissection, or upon the Living Subject." This is an admirable feature, and should, we think, enter into all treatises on anatomy. We cannot speak so favourably of the chapter on the anatomy of the fœtus, which is too meagre, and will not stand comparison with similar sections in other works. H. A.

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ART. XXVII.—*Notes on Fractures of the Upper Extremity.* By JOHN H. PACKARD, M. D., one of the Surgeons of the Episcopal Hospital of Philadelphia. 8vo. pp. 58. New York, 1867.

No class of injuries is more interesting to the practical surgeon than that of fractures, as well from the frequency of their occurrence in ordinary experience, as from the fact that they are almost always (if we may use the term) acute cases, their treatment being generally susceptible of satisfactory completion without the weariness on the part of both patient and doctor, which is so apt to attend the management of other common surgical affections, such as ulcers, burns and scalds, or chronic affections of the joints.

The pamphlet before us contains, as we learn from a foot-note, the substance of a series of lectures (the second under a bequest of the late Dr. Mütter) delivered in April, 1866, at the hall of the Philadelphia College of Physicians. The foundation of this "Mütter Lectureship" on Surgical Pathology we regard as one of the most important provisions for the extension of medical science that has been instituted in Philadelphia for many years. It will be remembered, by our readers, that Mr. Paget's admirable lectures upon Surgical Pathology were originally written for delivery upon a similar foundation; lectures that in their published form have passed through many editions and gained for their author a deserved and world-wide reputation.

Dr. Packard is already well known to our readers as a writer upon Fractures, from having some years since translated and edited the first volume of the inimitable work of Malgaigne. In the pamphlet before us Dr. Packard has confined his remarks to the fractures of the upper extremity, and has illustrated his pages with numerous original woodcuts. The pamphlet consists of five portions, discussing respectively (1) the structure of bone and the general causes of fracture; (2) fractures of the clavicle; (3) fractures of the scapula and humerus; (4) fractures of the forearm; and (5) fractures of the lower extremity of the radius.

We are pleased to see that Dr. Packard has very clearly pointed out the beautiful arrangement of interlacing arches in the intimate structure of bones, by which their strength is so greatly increased.

In opposition to the views of Malgaigne, Hamilton, and others, Dr. Packard believes the displacement and deformity in cases of fracture to be almost entirely due to the action of the circumjacent muscles at the moment of fracture. The example which he gives of deformity produced by another cause—viz., the outward rotation in fractured thigh from the weight of the foot—seems to us, however, rather an unfortunate illustration, as the same outward rotation occasionally persists even when the foot is replaced in the vertical position; just as eversion

of the knee is one of the most troublesome deformities in cases of fracture of both bones of the leg, though the foot may be most accurately adjusted to the foot-piece of the fracture box.

There is one cause of deformity after fracture to which we find no allusion in the pamphlet before us; this is the natural *elasticity* of the surrounding soft parts, without regard to any actual muscular *contraction*. This is well pointed out by M. Anger (in the case of fractures of the clavicle) in his magnificent illustrated work now in course of publication by M. Germer Baillière, of Paris. The clavicle, in the natural state, is *held down* (as it were) by the weight of the arm and the action of the muscles attached to its lower surface (especially the deltoid), and indirectly by those attached to the scapula; now, in case of fracture, most of these forces continue to act upon the acromial portion of the clavicle, while the sternal portion, separated from the rest by the solution of continuity, is tilted upwards by the natural elasticity of its ligamentous attachments, the sterno-cleido-mastoid muscle, etc. That this is correct is shown by the fact that in many cases though the shoulder be elevated, the scapula drawn backwards, and the other usual indications met, yet the deformity will remain, and in such cases can only be overcome by making direct pressure upon the outer end of the sternal fragment.

Dr. Packard follows the majority of writers in stating that after fracture of the clavicle, "pushing, pulling, and lifting are all rendered either impossible or very imperfect until union takes place." In the same view it has been generally stated that a diagnostic mark of this fracture is the impossibility of raising the arm behind the head; but as demonstrated by Velpeau there is no impossibility in the matter, a portion of the trapezius muscle substituting, though imperfectly, the function of the clavicle in steadying the shoulder, and the patient being really able to raise the arm though naturally shrinking from doing so on account of the pain attending the movement.

Dr. Packard's suggestion that fractures of the clavicle may be produced by that bone being bent over the first rib, as a stick is broken by being bent over the knee, has certainly the merit of novelty; we think, however, that its demonstration is as yet a thing of the future.

We have chosen Dr. Packard's remarks on fractured clavicle for comment, as perhaps offering a wider scope for diversity of opinion than other portions of his subject. We have found his remarks on treatment practical and judicious, as might be expected from his known reputation as a surgeon of skill and experience. We commend his well-printed "Notes" to those of our readers who may wish to refresh their recollections upon this most important branch of surgical practice.

J. A., Jr.

ART. XXVIII.—*Researches upon "Spurious Vaccination," or the Abnormal Phenomena accompanying and following Vaccination in the Confederate Army during the recent American Civil War.* By JOSEPH JONES, M. D., Professor of Physiology and Pathology in the Medical Department of the University of Nashville, Tenn. 8vo. pp. 134. Nashville, Tenn., 1867.

THESE researches were published originally in the *Nashville Journal of Medicine and Surgery*. They are based upon facts observed among the troops of the "Confederate armies," and lead to conclusions in respect to the cause of the failure of vaccination to protect the system from variolous infection, and the positive disease inflicted upon the system by the employment of certain forms of spurious and contaminated virus, which, though not absolutely new, are of the highest importance in their practical bearing.

Dr. Jones, as the result of his investigations, presents the following prominent causes of the injurious effects of attempts to place the system under the influence of the vaccine infection occasionally met with: 1st. Depression of the vital forces from fatigue, exposure, and poor diet, impoverished, vitiated, and scorbutic condition of the blood of those vaccinated or yielding vaccine matter.