

No surgeon of the present day can afford to ignore the importance of a thorough knowledge of the position, growth, and (final effacement by completion of) ossification of the various epiphyses of the growing human skeleton. And it is interesting to note that it constitutes a department of science which was the very latest to concentrate the serious attention of either anatomical investigator or operating surgeon. The resection of joints is, indeed, an operation of comparative juniority: a rather late invention—or, more probably, a re-discovery of knowledge and practice which had been lost during the middle ages. Before the discovery of the methods of general anaesthesia, the operation of resection was far too prolonged a process of torture to permit a possibility of its wide diffusion. And during the period which elapsed between the introduction of anaesthesia into surgical practice and the employment of antiseptics, the opening of the large joints—especially that of the knee, for which the operation was most frequently indicated—proved far too dangerous to limb and life.

The net result of the conditions associated with resection of joints in pre-anaesthetic times was that the great object of the operator was to hasten through the steps of the procedure with the maximum degree of velocity. Accordingly, the details were mostly swept over in darkness; while digital dexterity and rapid utilisation of rule-of-thumb were the factors which were most conducive to the consent of the patient, the recognised brilliancy of the procedure, and even to the degree of its ultimate success. No thought, or very little, was taken for the position of epiphysary lines—even for a considerable time after their overwhelming importance with regard to determination of osteal longitude had become a recognised item of physiological anatomy.

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The growth and development of the osseous system constituted one of the latest domains of anatomical investigation. It is of essentially modern origin; a characteristic study of the age which had learned to utilise the microscope, and had learned to formulate the facts of the associated science of embryology. The practice of even crude dissection of the human body was very limited during the middle ages, as all who possess an even elementary knowledge of the history of our profession must know. It cannot be said to have borne ripe fruit before the days of Andreas Vesalius, who surely deserves to be credited with the founding of the modern science of (human) anatomy. But, even long after his time, and with comparatively scanty material for investigation, the curiosity (or the energy) of the anatomist seems to have been satisfied (or exhausted) when he had reached the unmoving bed-rock of bone. Penetration of the latter offered no special items of information; nothing more than a few broad and plain facts, which could be transmitted from hand to hand with the greatest possible ease.

The limitation of osteological acquirement in the older centuries are strikingly shown by such items as:

The prevailing popular belief that every man had a rib less than a woman, which the famous author of the "Religio Medici" thought it desirable, so late as the year 1672, to try to confute. His discussion of the subject opens with the following paragraph, which throws an interesting side-light on the scientific thought of that date—especially when the reader remembers that it was written by the most accomplished British physician of his generation:—"That a man hath one rib less than a woman is a common conceit derived from the history of Genesis, wherein it stands delivered, that Eve was framed out of a rib of Adam; whence 'tis concluded the sex of man still wants that rib our father lost in Eve. And this is not only passant with the many, but was urged against Columbus in an Anatomy of his at Pisa, where having prepared the skeleton of a woman that chanced to have thirteen ribs on one side, there arose a party that cried him down, and even unto oaths affirmed, this was the rib where-