

bone is regulated. The process of ossification has, however, this peculiarity, that the cartilage is progressively absorbed to make room for the deposits of bony substance. When the bone is long, separate points of ossification appear in the extremities, before the central portions are ossified; and the ends, thus formed into bone, are afterwards united to the shaft, so that the whole shall form a continuous bony mass. In the flat bones, also, if the surface be extensive, an additional number of arteries are engaged to perform the work, which is begun from several auxiliary centres of ossification, and the completion of which is materially accelerated by their co-operation.

This mode of increase often gives rise to a curious result, of which a striking example is presented in the bones of the skull. The brain, which these bones are designed to protect, requires this protection at a very early period of life. The growth of so large a surface of bone, as would be required for covering the brain, could not have proceeded with sufficient quickness for the exigencies of the occasion, if it had originated from a single point. Therefore it is that, besides being commenced at a very early age, the process goes on from a great number of separate points at the same time. The ossification is evidently hurried on in order to complete the roofing in of the edifice by the time at which the animal is to be ushered into the world, and exposed to dangers from the contact of external bodies. The divergent fibres shoot out rapidly, coalescing with those in their immediate neighbourhood, which co-operate to form an extensive bony plate. When they have reached the prescribed line, they have become so much expanded as to have lost the power of coalescing with the fibres which have originated from other centres, and are proceeding in a contrary direction. Yet the arteries still continuing to deposite ossific matter, each set of fibres insinuate themselves between those of the opposite set, for some little distance, and until their farther progress is stopped by the increasing resistance they encounter. The consequence is that the edges of the bones, which have thus met, are irregularly jagged, like the teeth of a saw, presenting externally the zig-zag line of junction