

III.

NOTICE OF A CRANIUM FOUND IN A SHORT CIST NEAR SILVER-MOOR, CARSTAIRS, LANARKSHIRE, IN 1847. By D. R. RANKINE, Esq., SURGEON, CARLUKE.

The cranium about to be described, since it was disturbed in the cist in which it had long reposed, has had somewhat of a devious history.

Discovered on 10th November 1847, and observed to bear evidence of a singular conformation, the skull was submitted to an eminent anatomist, who let it slip through his fingers,—but during his lifetime he continued to urge patience, as, no doubt, it would again turn up. Twenty-one years passed, and the skull was all but forgotten, when the Catalogue of the Museum of the Society of Antiquaries divulged the fact that it occupied a place on the shelves of that institution (D 12). It was then claimed, but delays occurred, and the claim fell asleep. It is only now, after fully twenty-eight years, that the relic has been restored to the rightful owner, who, on re-examination ventures to describe it, and, at the same time, formally presents it to the Society, which has so long already exercised the office of custodian.

It is well known that bakers' and butchers' boys, and those who habitually carry heavy burdens on the head, are apt to occasion depression of the condyles and occipital bone without fatal consequences or any apparent inconvenience. Disease destroys or alters the form of the bones of the skull, as of the bones of other regions of the body, so as to deform or render them useless; but in some instances, when nature is called on to aid in restoring disordered or deranged parts in the animal economy, a process is set up towards fortification and preservation, made strikingly evident, hundreds of years after death, when the change is effected by adventitious means in structures of a permanent nature such as bone.

This process is exemplified in a wonderful manner, in a modern cranium, figured and described in the "Edinburgh Monthly Journal of Medical Science" for 1843, bearing, as it does, clear evidence of a diseased enlargement of the skull in the region of the cerebellum, enough to seriously unbalance the head placed on its original condyles, and bears equally clear evidence of the agency called into play to meet the urgency. By vital

action the axis of the head, in that case, had evidently been borne from its original position and carried backward gradually, nearly an inch, in the needed direction, so as to rest the atlas on a succession of new bone growths—new condyles—the foramen magnum being correspondingly lengthened by the absorption of bone; and thus a new and useful, and no doubt necessary axis was established,—a process which man may dimly comprehend, but in no case institute. Nature was the sole physician, not he that directs the whirlwind of pill-boxes.

The cranium now under consideration presents one feature identical with the skull alluded to, in having adventitious condyles, giving play to a new axis of motion,—but unlike it in presenting no evidence of a cause for that change,—and therefore speculation, in this case, must take the place of demonstration in the other.

With other bones this skull was found, in a cist of the short type, during excavations while the Caledonian railway was being constructed in 1847, near Silvermoor, in Carstairs parish,—on the western margin of that extensive deposit of sand and gravel (in which the Kames of Carstairs occur) which borders Tinto for many miles, and which must have been formed before Clyde occupied its present channel, the spot being about midway between what is called the exploratory Camp of Agricola, north-east of Cleghorn Station, and the Roman Camp near Corbiehall farmhouse, called Castledykes. In a general way, it might pass for a specimen of the human cranium of normal character, except as regards the altered condition of the occipital condyles,—a condition not found, or at least not described, so far as known, in connection with crania of an early epoch.

The skull is not entire, but sufficiently preserved to mark its character. It is $6\frac{8}{10}$ inches in length; in height, from auditory canal to apex, $4\frac{6}{10}$ inches; from the same point to the centre of frontal bone above sinuses, $4\frac{4}{10}$ inches; from the same point to occipital prominence, $3\frac{4}{10}$ inches,—all measured by callipers. These measurements determine that the skull is of small size, and particularly so as regards the occipital region.

But the point which renders the skull remarkable is the style of the condyles. The original condyles are in position, flat in place of being rounded, but in size and otherwise normal. There is, however, very decided evidence that a new set of condyles were in use and being added

to during life, situated behind the original set. The addition on the right side is more advanced and distinct than on the left, and the progressive elongations of new bone planted posteriorly extend over the foramen posterius on both sides, which are tunneled for safety of the vessels; while the foramen magnum is lengthened backward by absorption of bone, no doubt to protect the spinal cord from constriction. The change of the axis of the head is consequently considerable, namely, $\frac{7}{16}$ of an inch.

After the strictest examination of the contour, cavity, and surface of this skull, nothing has been found or indicated to help in determining the cause for the special condition described, and the question remains, Wherefore this change of axis of the head? Nothing but the most urgent of causes could arouse the powers of the system to institute a process all but foreign; but, in absence of direct evidence, the cause can only be surmised. A permanent weight, whether from diseased action—such as an enlarging tumour of some size—or from an artificial source, would bring this ancient specimen to the same, or to a similar condition, with the skull previously referred to, where evident morbid action added to the weight of the posterior brain so much beyond the healthy bearings of the muscles and original axis that adjustment, by extraordinary means, suited to the purposes of life, was instituted and completed by the vital architect.