Femur:

1. Massive enlargement of bone for three inches above internal tuberosity.	1. Corresponding enlargement; projection on inner side more marked.
2. External tuberosity enlarged.	2. Exostosis projecting into popliteal space.

Tibia and Fibula:

1. Large exostosis below head of fibula.	1. Corresponding exostosis.
2. Large exostosis below head of tibia.	2. Corresponding exostosis.
3. Nodule two inches above external malleolus.	3. Exostosis two inches above ankle, involving both bones, and extending round to each side.
4. Nodule on internal malleolus.	4. Nodule one inch above internal malleolus

Metatarsal Bones:

1. Small nodules on dorsal aspects of second, fourth, and fifth metatarsal bones.	No corresponding exostoses.

It is to be noted that on the right side the exostoses limit the pronation of the forearm; and on the left side supination is impossible. The free extension of the knee-joint is also somewhat impeded by the neighbouring growths.

It may be remarked that whilst there is a general tendency to symmetry in the position of the exostoses, they do not correspond in size on either side of the body. Thus, both scapulæ have exostoses, but the right is considerably more enlarged than the left; whereas, as if to supplement the deficiency, the left humerus is much more enlarged than the right. No special correspondence, either with centres of ossification, or insertion of muscles, is traceable in the sites of the exostoses. In size, they vary from that of a small pea to that of a small orange; and in some situations large bony masses are formed by the coalescence of two or more exostoses.

The history of the case throws but little light on its etiology. There is no hereditary history of abnormal bony growths (such as have been observed in other instances);* and, so far as is known, the only family dyscrasie are acute rheumatism on the father's side, and rheumatic arthritis on the mother's. Though delivered with forceps, no symptoms of imbecility were observed till after an attack of pneumonia at one year of age; soon after which small exostoses on the left shoulder-blade and on the ribs were noticed for the first time. The knees were noticed to be "growing out" when the boy was two years old: at this time he had an attack of "brain-inflammation". The bony growth has been progressive from that time to the present, and treatment has been of no avail in checking it. There are no indications of syphilitic taint.

The relation of the osseous affection to the boy's mental imbecility is an interesting question. Although there is no obvious external deformity of the skull, it seems quite possible that (as in the analogous affection described under the name of osteitis deformans) concentric cranial hypertrophy may exist, and the due development of brain be thereby impeded.

GRAVIMETRY IN THE MORTUARY; OUGHTON'S NECROMETER, ETC.

By J. P. H. BOILEAU, M.D., Surgeon-Major,
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IN the last number of *Brain*, there is a short but valuable article by Mr. Bevan Lewis of the West Riding Asylum, on the Examination of Cerebral Structures. Having referred to the more important methods adopted for ascertaining the specific gravity of organs, he states that Mr. Stevenson (Philosophical Instrument Maker, 9, Forrest Road, Edinburgh) has devised a simple and most reliable apparatus for estimating at the same time both the bulk and the specific gravity of large irregular bodies, by displacement; and he points out the simplicity and value of the method, whereby the weight, the volume, and the specific gravity of the brain, *e.g.*, may be simultaneously obtained. The apparatus is figured.

For several years past, this method has been employed at the Royal Victoria Hospital at Netley, for determining such physical conditions; but the very suitable and convenient apparatus used is the invention, or design rather, of an officer in the Army Medical Department, Surgeon-Major Tyler Oughton. It is fully described and illustrated in the eighth volume of the *Army Medical Department Reports* (1869), pages 520 to 528.

* Case by Dr. Poore, *Lancet*, November 29th, 1873.

The entire apparatus used by Mr. Oughton is comprised in a counter weighing machine and the "necrometer", which consists of a cylindrical metal vessel and a glass measure. The cylinders vary in size: one holding about six gallons is most frequently in requisition; its height is eighteen inches, and its diameter ten. Each cylinder has a stop-cock discharge-pipe at about the junction of its upper with its middle third, communicating with the interior by an open funnel or tube having its mouth horizontal. Mr. Oughton's cylinders are also provided with a second tap near the bottom. It is found to be a convenience sometimes in emptying them. The necrometer measures are of glass, having a diameter of from one to two inches, and a height of from eight to twelve. Each is graduated to measure cubic capacity in inches on one side, and to indicate the equivalent weight of distilled water on the other side. These indications were originally in drachms, but subsequently in grains, to correspond with the weights used in the machine.

The method of using the necrometer is thus described by Mr. Oughton: "Close the stop-cock and fill the cylinder with water until it rises above the aperture of the funnel. On allowing the water to escape through the tube, it will find the level of the aperture. The organ to be measured having been well washed, and weighed in the machine previously, is now introduced into the vessel after reclosing the stop-cock. Lastly, the water that has been displaced is allowed to escape through the tap to the level of the funnel-top, and is received into the glass measure. The bulk or volume of the immersed organ will be indicated by the measure, and likewise the weight of an equal volume of water. Divide the weight of the organ in air by the weight of the water of displacement, and the quotient will express its specific gravity."

When the organ is specifically lighter than water, *e.g.*, the healthy lung, Mr. Oughton makes use of a heavy solid, whose volume and equivalent weight of water have been already determined. This having been tied to the lung, so as to sink it, the volume and the water-weight of the two parts are ascertained according to the above plan; then the volume and water-weight of the added body are deducted from the totals, and the difference gives the volume and water-weight of the lung.

I have, however, adopted a simpler plan, using a "cage" of perforated zinc constructed of suitable dimensions, and having a cover easily fastened on. The cylinder having been filled as before to the level of the funnel-top, the stop-cock is closed. The empty covered cage is dropped into the water; it sinks and displaces a certain quantity, which is allowed to flow out through the stop-cock, and this is then closed. The cage is now raised, and the light viscus having been placed in it, lowered again into the water. It is clear that the further displacement which now takes place represents the volume of the viscus itself; and this, as well as the weight of an equivalent bulk of water, is indicated by the collecting glass measure.

In Mr. Stevenson's apparatus, according to the description and figure given in *Brain*, the organs or substances require to be depressed below the water-level by means of a brass contrivance. This can only be accounted for, in the case of a body specifically heavier than water, by the specific gravity of the latter having been raised by the addition which he makes to it of salt, or sulphate of magnesia. The simpler method is to use plain water.

Full information on the subject will be found in the *Army Medical Department Reports* for 1869.

HOSPITAL SUNDAY.—The annual general meeting of the constituents of the Hospital Sunday Fund is announced to be held at the Mansion House on Tuesday, December 20th, at 3 o'clock. The Rev. Canon Spence, Vicar of St. Pancras, has given notice of motion to alter the constitution of the fund so as to allow a grant of 4 per cent. of the collection each year to be expended in the purchase of surgical appliances, instead of 2 per cent. as heretofore.

ALLEGED DISCOVERY OF STILL-BORN CHILDREN.—At a recent meeting of the Burial Committee of the Hull Corporation the chairman reported that the men engaged in putting in order a disused burial ground in Castle-street had come upon a large number of bodies of still-born and other children buried about three or four inches below the surface. In all between twenty and thirty bodies had been found, some in boxes and some unenclosed. It was suggested that persons had got over the walls and buried the bodies; but the chairman said this could not have been so, as the bodies were laid in regular rows, and the only possible conclusion he could arrive at was that the late keeper of the ground had made interments for a consideration. Several of the bodies had been taken up and placed in the dead-house. It was resolved to communicate these facts to the Home Secretary.