

ON CALCIFICATION OF ADIPOSE TISSUE.

Dr. Edward H. Bennett, Professor of Surgery in the University of Dublin, records (*Dublin Journ. of Med. Sciences*, Jan. 1878) an account of calcification of adipose tissue, which it is believed has not hitherto been noticed. The change is seated in the connective basis of the tissue and not in the contents of the cells. Dr. Bennett describes the condition as follows: In the subcutaneous tissue of the anterior aspect of the leg in elderly women, small hard bodies may be often observed—flattened on the superficial and deep aspects, circular in outline, the largest about one-fifth of an inch in diameter, the smallest mere grains. These bodies are freely moveable on the deeper tissues and beneath the skin, and are arranged with a rough symmetry in the two limbs; if there be but one or two in a limb, the finger carried over the corresponding part of the opposite limb readily detects even the single specimen. When they are numerous, their symmetry is similar to that of cutaneous eruptions, not absolutely exact, but very nearly so. They occur in thin-skinned, pale bodies, and so can generally be seen before their detection by the hand. I have never seen them associated with varicose veins, or with skin eruptions, or ephelitic markings on the legs. They are most commonly seen in the limbs of the pauper subjects in our dissecting-rooms; but I have seen them in the living also in hospital. They are not the seat of any trouble or pain to the patient, and pass unnoticed by them until attention is directed to them by the surgeon. I have never seen them in the male. In my early examinations of them, I sought for small veins, or varices, as their seat, under the impression that they were phleboliths. I next searched for a lymphatic vessel passing into or connected to them, being still impressed with the idea that they were the result of some vascular obstruction, but I failed to find any anatomical support for such idea.

Adopting the ordinary process for hard, brittle substances, I polished a flat surface on one face of a section made with a fine saw through the centre of the body, and cemented it to a glass slide with old Canada balsam; I then ground

away the structure until I obtained a fine transparent section. In this process I learned that the densest part of the structure was at the circumference—the most open and friable at the centre. Examined, after completing the mounting with fluid Damar varnish, the pattern of the thin circumferential part was clearly seen to be that of ordinary condensed connective tissue, forming a capsule for the body, calcified. In it the usual irregular lacunæ, dark by transmitted light due to gaps in the structure, were readily seen; septa from the capsule passed irregularly through the structure, themselves calcified and showing lacunæ similar to the outer layer. The arrangement of these parts was such as every one familiar with the microscopic appearances of the compound tissues would recognize as that of the envelopes and septa of subcutaneous fat. In the intervals inclosed by these calcified envelopes and septa the mass of the structure appeared arranged strictly in the pattern of the fat cells, the intercellular substance being calcified and breaking with a brittle, glassy fracture. Fearing error in a single observation, I repeated the process with several specimens, and obtained results exactly similar. I next macerated a fresh specimen in a weak picric acid solution, to which a minute quantity of hydrochloric acid was added. I established in this way the fact that the earth salts were deposited in the connective tissue forming the capsule and septa of adipose tissue, and in the intercellular structure of the fat cells. The decalcified tissue presents the pattern of ordinary fat, with only the exception that the structures out of which the earth salts have been dissolved are thicker than in the healthy tissue. One point further only remains to be stated—the position of the calcified body in the fat lobule; this I have always found to be marginal, never central. I have never seen any such alteration as I have described in lipomata or in any part of the body except that mentioned above.—*Monthly Abstract.*

At the Matriculation Examination of the London University in January, 1878, 495 candidates presented themselves, of whom 169 passed, and 326 were rejected.