

extending to a variable distance inwards, over the articular surface, and projecting externally so as to form lip-like or overhanging margins, which, to a greater or less extent, conceal the neck of the bone, so as to convey the idea of apparent shortening of the neck. In the head of the thigh-bone, especially, the general effect is to give to it, more or less, a mushroom-like form, the upper surface being apparently flattened when the articular cartilage has disappeared, and the exposed bone has become eburnated or polished by the ivory-like deposit, constantly met with in this disease in situations from which the articular cartilage has been removed and the bones have been subject to friction.

If a section of bone in this condition be made, it will be found that there is a general increase of density both in its cancellous and its compact tissues. The cancellous tissue of the head of the bone is not only increased in density beneath the eburnated portion, but throughout the head and neck of the bone, so that the entire specimen would represent an increase of weight and density of bone.

As to the precise nature of the process by which the enlargement of the articular extremities of the bone is affected, the author alludes at page 213 to a description of the process given by Mr. Wm. Adams in the *Transactions of the Pathological Society*, vol. iii, 1851. It was at this date shown by Mr. W. Adams that the enlargement was not due to any inflammatory expansion of cancellous bone-tissue, as had been supposed by Rokitansky and others, or to any outgrowth of bone, but was produced by a process of hypertrophy and ossification of the articular cartilage generally occurring near to the margins of the articular surfaces of the bones involved. The microscopical appearances are shown in a plate accompanying the paper.

Simultaneously with the enlargement of the articular extremities of the bones, changes take place in the corresponding articular cavities; and in the hip-joint the acetabulum becomes very irregular and much altered in shape, and its capacity increased for the reception of the enlarged head of the femur. The articular cartilage also disappears from the surface of the acetabulum, and the bones become eburnated and covered with porcellaneous deposit in parts exposed to pressure and friction. The enlargement of the articular cavity is partly due to irregular absorption, and partly to ossification taking place in the surrounding fibrous structures.

In another class of cases, also described by Dr. R. Adams, the head of the thigh-bone is diminished in size and the neck shortened, a process of atrophy and interstitial absorption characterising this condition. This class of cases often presents symptoms, such as shortening of the limb, with eversion, etc., which might be supposed to depend upon fracture of the neck of the thigh-bone; and in illustration of this error the well-known case of Mr. Charles Mathews, the celebrated comedian, is adduced. He was supposed by some authorities to have sustained a fracture of the neck of the thigh-bone within the capsular ligament, caused by a fall from his gig ten years previous to death, which resulted from disease of the heart. The hip-joint was removed, and exhibited at the meeting of the British Association in Dublin, in the year 1835, by Mr. Snow Harris, of Plymouth, afterwards Sir William Snow Harris, who maintained the view of fracture of the neck of the bone. But this was opposed by Dr. Robert Adams, Mr. Smith, and Mr. McDowell, and the examination of the specimen led conclusively to the opinion that the case was one of chronic rheumatic arthritis, a view in which Mr. Snow Harris himself afterwards concurred.

In the shoulder-joint, the long tendon of the biceps, as an *intra-capsular tendon*, is peculiarly apt to become disintegrated and destroyed; and, the disease being associated with muscular atrophy, the importance of these changes in connection with the cases of supposed injury and subluxation of the humerus will be at once apparent.

In the ginglymoid articulations, and more especially in the knee-joint, where this disease seems frequently to occur, the structural changes in the articular cartilages and bones, as well as in the fibrous and other tissues, are essentially similar to those occurring in the hip; the only peculiarity being that parallel grooves and sometimes deep furrows are formed in the direction of flexion and extension of the joint, the articular cartilages having disappeared, and the bone-surfaces enamelled and covered with the ivory or porcellaneous deposit in these situations corresponding to pressure and friction.

With regard to the terminations of chronic rheumatic arthritis, it has been observed that it exhibits a remarkable indisposition to terminate in suppuration, a character insisted upon by Dr. R. Adams, and also pointed out by Sir B. Brodie. But Dr. Adams states that he has seen an attack of acute arthritis supervene on the chronic affection and terminate in suppuration; an example of which ending fatally is recorded in case 19, page 391. As a general character of the affection, however, he points out the non-liability to suppuration.

Another peculiarity also, is, that the disease has no disposition to terminate in true bony ankylosis; motion, however limited, being preserved

by the process of eburnation and porcellaneous deposit on the articular surfaces already described. In the more severe forms of the disease, the motions of the joint are limited by the osseous growths thrown out from the articular margins, and by ossification of the cartilages, and also from the surrounding fibrous structures. So long as the disease is confined to a single articulation, whether the hip or the knee, the patient can move about with but little inconvenience beyond the lameness and occasional pain. But when several joints become affected, and if the hips or knees in both legs should suffer, then the patients become gradually deprived of all powers of locomotion, and sometimes remain for many years as completely bed-ridden cripples, and many distressing cases of this kind are recorded in Dr. Adams's work.

With regard to treatment, it is admitted by all authorities that it is chiefly in the early stage of this chronic and progressively increasing affection that we can hope to arrest its progress; and here the treatment of careful observers varies according to the view which they entertain of its inflammatory or non-inflammatory character.

Dr. Robert Adams is an advocate of the inflammatory nature of the affection, and in the early stage seems generally to approve of local depletion by means of a few leeches. After describing the local and constitutional forms of this affection, in the latter of which many joints are simultaneously affected, he observes, at page 315—"But, for my part, I will say that I have seen advantage result from this practice of local depletion, even in cases of patients with pallid looks and thready pulses, and in whom the local pains were not palliated until the local depletion alluded to had been resorted to." He also advocates the local application of compound tincture of iodine and the use of cotton-wool covered with oiled silk.

In the medical treatment of these cases, the author refers to the opinions expressed by Dr. Fuller and Dr. Garrod in the editions of their works which have been published since Dr. R. Adams issued the first edition of the present work, and agrees generally with many of the observations which both these authors have made as to the local and constitutional treatment. He especially adverts to Dr. Fuller's recommendation as to the value of arsenic in many of these cases, and also advises the administration of sulphur, observing at page 317—"Among the medicines which have been found useful to patients affected with chronic rheumatic arthritis sulphur should not be omitted. The form in which I have found it most useful and readily taken, is the Chelsea pensioner electuary."

Dr. R. Adams also recommends the use of warm-baths, douches, etc., and, where practicable, a residence at various foreign watering-places such as Barèges, Aix les Bains, etc.

In concluding our notice of Dr. R. Adams' valuable monograph, we cannot but again express our admiration of its intrinsic merit, and would strongly recommend it to all who desire to become acquainted with the pathology, clinical history, and treatment of chronic rheumatic arthritis.

## REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

### DINNEFORD'S HORSEHAIR FLESH-GLOVES.

NOT every one knows how to take a cold bath, although the art is supposed to be one particularly cultivated by Englishmen, and of which the enjoyment is a secret mystery which has something insular and national in its character. It is a popular theory, that the right thing to do is to jump sharply out of bed and to rapidly deluge the skin with showers of cold water, drying it with vigorous friction. This, however, is suitable only for the most hardy constitutions. The true way to take a tubbing in the morning is to rub the skin vigorously, using dry friction for at least five minutes before the bath; and not to bathe in cold water until the capillary circulation has been thoroughly stimulated. In this way it is well able to resist the shock; the lowering of the temperature, and the coldness and shivering, which sometimes follow the cold bath, are in this way avoided. For the purposes of friction prior to and after the cold bath, the Horsehair Flesh-Gloves, Belts, Bath-Brushes, etc., manufactured by Messrs. Dinneford and Co., of 172, New Bond Street, are unsurpassed in value. They are admirably made, and are of various shapes and degrees of hardness, and are suited to skins of different degrees of delicacy.