

which was then inaugurated has acted as the exciting cause for the deposit of a crude, amorphous material in the soft parts about the bone, and finally in the bone-structure itself. The malleolus appears very much enlarged, and is rapidly progressing towards caries. The disease would end in destruction of the joint if it were not arrested by proper treatment. The patient's bowels are irregular, the breath is offensive, and the tongue furred, with pits on the tongue showing the orifices of the ducts of the enlarged mucous follicles with the mucus overflowing around them—a condition which probably indicates that of the mucous membrane throughout the alimentary tract, by which the lacteals are clogged, the digestion is impaired, and the absorption of chyle interfered with. This accumulated secretion in the bowels forms what was designated by the older writers as saburra.

To give the patient the best chance of recovery, we will endeavour to correct the secretions, improve the digestion and appetite, and bring the general health nearer the normal standard. Until the condition of the alimentary canal is changed, but little benefit can be expected from treatment. We will therefore give, as an alterative cathartic:—

R. Hydrarg. chlor. mitis, gr. jss;
Sodæ bicarb.,
Pulv. rhei,
Pulv. myrristicæ, āā . gr. ss.

This is to be given every third night.

As a tonic she may have disulphate of quinia:

R. Quinia sulph., . . . gr. xxx;
Acidi sulph. aromat., . . . ℥j;
Tinct. cardamom. comp., ℥ij;
Syr. acaciæ, . . . ℥ij. M.

S.—A teaspoonful, in a little water, before meals.

Her diet must be carefully regulated, interdicting pastry, salt meat, uncooked vegetables, candies, and all other sweet things, and all food which is digested with difficulty. She may have plenty of eggs, milk, rare beef or chicken, with a little ale or claret if she likes it. She might be given some weak milk punch even, or egg-nog, with advantage. As she is anæmic, she may have also a tablet of the pyrophosphate of iron (gr. ij made up with gum and sugar) after each meal; this chalybeate I prefer, and always use, in these cases, as it is less apt than any other form to blacken the discharges from the bowels and render them irritating.

There is fluid around the joint, and the bone is quite soft. To relieve the tension, and let the fluid escape from its bed, I will puncture in several places, with a delicate tenotome, the different layers of skin, fascia, and periosteum, which are arranged like the alternate elements of a voltaic pile. The bone is so soft that the knife enters it like a piece of soft wood, and stands vibrating, as you see, as if it were stuck into a cedar shingle. Having made ten or fifteen of these little punctures, and allowed them to bleed sufficiently, the joint will be wrapped in dilute Goulard's extract and laudanum, and, as far as is practicable, kept at rest in an elevated position. These punctures give the fluids exit, relieve the strangulation, deplete the congested vessels, and do an immense

amount of good. Of course, in introducing the knife care must be taken to avoid injuring the larger vessels or nerves. With this precaution I have never seen punctures do harm, and they are a thousand times better than leeching.

[The case was presented at several successive clinics, and soon was progressing most satisfactorily towards a cura.]—*Philadelphia Medical Times.*

ON PROMOTING THE GROWTH OF BONES.

Dr. Ollier, well known to the English medical public by his remarkable labours on the Reproduction of the Bones, read a paper at the Medical Section of the French Association for the Advancement of Science "On the various Chirurgical means by which the Growth of Bones is Increased or Arrested." Dr. Ollier made many experiments on animals in order to ascertain the process under which the growth of bones takes place. He believes, with Flourens, that the intermediate cartilage is an important agent of their evolution. Some years ago he removed, in young animals, the intermediate cartilage of some of the long bones, and he obtained the following results:— Immediate arrest of the growth of the bone at the extremity from which the intermediate cartilage had been removed, the bone still growing on at the opposite end. Intense irritation of the cartilage gave results similar to those obtained by its removal. Dr. Ollier has also observed that osteitis, situate in close proximity to the cartilages causes the bones to cease growing at the diseased extremity. If, on the other hand, a long bone be irritated in parts remote from its cartilages, it will increase in length; if a bone, still growing, be irritated in any part of its shaft, either by application of caustics or other means, the bone will increase in length from a sixteenth to a twelfth of its total length.

Some very convincing and well-prepared specimens of the results obtained on animals were exhibited by Dr. Ollier, and fully proved the correctness of his assertions.

Dr. Ollier has applied these physiological facts to practical surgery; he has operated on superficial bones, and employed, as an irritant, the Vienna paste, which he applies so as to reach the bone after the destruction of the integuments. On several occasions he has obtained a considerable increase in the length of the bones. He quoted the following case:—A young girl was admitted into his wards at the Hôtel Dieu of Lyons suffering from osteitis of the tibia adjoining the cartilage. On recovery this bone was found to be twenty millimetres shorter than the sound one. To the anterior surface of the shorter tibia Dr. Ollier made an application of Vienna paste. Some time afterwards he repeated the cauterisation, this time using the "pâte de Canquoin." The bone slightly exfoliated. Five weeks afterwards a slight increase in length was apparent, and three months and a half from the date of the operation the bone had gained in length thirteen millimetres.

Where a permanent irritation is required, it is necessary to repeat the application of caustic;

the action of the caustic should be carried to the bone itself. The fibula need not be interfered with. The elongation of the tibia will cause the smaller bone to be dragged down with it; a partial dislocation takes place at the upper extremity, but the foot remains straight.

To arrest the growth of a long bone the cartilage should be partly destroyed, but without penetration into the joint. This arrest of growth is also obtained by the removal of a small piece of the cartilage; after these operations the wound must be carefully closed and the limb immobilised.

Dr. Ollier has performed this operation twice successfully. On one occasion a purulent osteitis of the radius near its intermediate cartilage had caused the bone to cease to grow, whilst the ulna, still increasing in length, had deviated the hand inwardly. All orthopædic means having failed, Dr. Ollier destroyed part of the cartilage of the ulna in order to arrest its growth; a few months afterwards the hand was already straighter, and ultimately it recovered its normal direction, as he was enabled to show from plaster casts of the forearm taken before the operation and after recovery.

Dr. Ollier remarked on the numerous applications to surgery of this power to control the growth of bones; not only had experiments made on animals proved the correctness of his views but clinical observations had demonstrated their practical value, and testified to their curative power in certain diseases of the bony structures of man.

SHORT NOTES.

ACTION OF SENNA ON THE URINE.

M. Gubler demonstrated to the Société Thérapeutique of Paris, at the séance of August 13, 1873, the fact that senna will cause a discoloration of the urine precisely similar in appearance to that which occurs in jaundice. On the addition of nitric acid, however, to the urine, the biliary reaction does not occur; moreover, caustic potash changes the colour to a magnificent purple. Caustic potash added to the infusion of senna produces only a faint indication of purple, and it is probable that the principle of senna undergoes an oxidation in the system similar to that of turpentine, asparagus, etc.—*Philadelphia Medical Times.*

AROMATIC LIQUID PEPsin.

"Rusticus" writes in the *Boston Medical and Surgical Journal* as follows: "Please say to the other country doctors, who don't know any more than we do, that pepsin can be very easily made an 'Aromatic Liquid pepsin' by cutting up a calf's rennet bag and bottling it up in half a gallon of pale sherry. It won't cost nearly so much; and mother used to feed her thirteen babies on it, at the rate of a teaspoonful to a cup of milk, with a little sugar mixed in, and a scratch of nutmeg on the top. I am told that you can buy rennet-bags cheap in Boston market. They are much better, I believe, after drying for weeks; and I should prefer them to pepsin. They will keep longer and better."