Professor Struthers,³ who likewise mentions degrees of deficiency sometimes discovered in the twelfth pair.

In Förster's *Missbildungen des Menschen* the following paragraph is found: "Finally, clefts in the thorax may sometimes be caused by defects of the ribs, in that several ribs of one side may be wanting from the mid-point onwards, and the gap thus formed being closed by a firm membrane. It is the anterior portions of the ribs which are wanting, together with the rib cartilages. Sometimes the rib ends are not quite absent; but the ribs, the posterior portions of which are perfect, are continued forward as riband-like bands."

Otto, in his *Pathological Anatomy*, also remarks upon the occasional deficiency of the attachment of the front ends of the true ribs, but the three cases to which he gives references differ materially from the condition which I have described. Of instances of similar deformities in the living subject I find the following records: (a)⁴ A case presenting a longitudinal furrow between the six upper ribs of the left side and their cartilages; (b)⁵ an infant in which all the ribs of the left side except the first two, which were perfect, were represented by short rudimentary processes; (c)⁶ a case of a man in whom a depression "as big as the fist" on the left side of the chest was accounted for by the partial deficiency of the third, fourth, and fifth ribs on that side.

The rudimentary first ribs have been variously regarded as possessing developmental and even evolutionary significance, but instances of the retarded development of the other ribs are probably purely accidental faults, comparable to those occasionally found in almost all the other bones in the body.

It seems probable that the exact nature of this deformity may not be always readily recognised in the living subject without the aid of x-ray photography. It is not easy by digital examination alone to differentiate the somewhat obscurely felt tense membranous bands from bone, so that the condition may be quite readily mistaken for an acquired local incurvation of the chest wall.

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A PARTIAL AMPUTATION OF THE FOOT.

By JOHN HERN, M.D., F.R.C.S. EDIN.,
Surgeon, Darlington Hospital.

At the annual meeting of the British Medical Association at Edinburgh in August, 1898, I showed to the Surgical Section a case in which I had performed partial amputation of the foot by a new method. The lines of incision in this amputation are practically those of Chopart's operation, the antero-posterior being preferable to the lateral flaps if they can be obtained.

The incisions are carried down to the bones, the lower flap being dissected back to the level of the medio-tarsal joint, the upper to that of the ankle-joint; the foot is now forcibly depressed, the ankle-joint opened anteriorly, the lateral ligaments of the ankle-joint are next cut, also the strong calcaneo-astragaloid (interosseous) ligaments, and the whole tarsus, excepting the os calcis, removed. The os calcis is now drawn forwards between the malleoli, and is wired firmly in that position: one strand of wire passed obliquely through the lower end of the tibia and the anterior portion of the os calcis is usually sufficient. Care should be taken that the heel is in the direct line of the tibia. In some cases about $\frac{1}{4}$ to $\frac{1}{2}$ inch of the anterior portion of the os calcis was sawn off; in others it was found easier to do a Chopart first, then to seize the head of the astragalus with the lion forceps, and remove it by inserting the knife under it, and cutting the strong calcaneo-astragaloid interosseous bands, and then proceeding as above described to bring forward the os calcis between the malleoli. The resulting stump is an excellent one; it is broad and firm, consisting as it does of the heel practically unaltered.

The human foot may be regarded as a tripod, the heel, the ball of the great toe, and the ball of the little toe being the

three points at which the weight of the body is transmitted to the ground. Now, given an injury destroying all possibility of retaining both anterior points, the most satisfactory method of transmitting the body weight to the ground is through the heel alone, as done by this operation.

There is a broader stump than produced by Syne's amputation, and attended with less shortening and less shock. There is no tendency to drawing up of the heel and walking on the cicatrix, as in Chopart, for the enemy (*tendo Achillis*) is disarmed by the drawing forward of the os calcis, thus shortening the projection backwards of the heel and lessening the leverage.

An ordinary boot can be worn with comfort, and keeps well in shape if a steel plate be stitched into the sole and the sides of the boot stiffened or supported by light side irons and the front portion of the boot stuffed in some way.

THE TREATMENT OF DYSENTERY.

By D. M. M. ROSS, M.B.,
Wethersal.

WHILE practising in Jamaica, I was on the whole disappointed with the results which ipecacuanha gave, finding it by no means the "radix antidysenterica," which it appears to be in India. In some cases, more particularly in European patients and in the early stages of the disease, its beneficial influence was marked, but in a number of these there was nothing to indicate that rest in bed, dieting, and mild aperients would not have effected as desirable a result. The ordinary ipecacuanha powder of the *B. P.* appeared to be more efficient than the preparation "sine emetine."

In negro patients the average results were more satisfactory from the magnesium sulphate treatment. In some of these, however, ipecacuanha was useful; in others the sulphate caused so much griping that its use had to be abandoned.

It may be that the difference in the results produced by ipecacuanha in the two races is dependent on the difference of their modes of life, more especially as regards diet, and its effect on the functions of the liver.

The more I saw of the disease the more did I feel that treatment had to be varied to meet individual peculiarities and the different stages through which the disease passes. It is most important that coexisting cachectic conditions—for example, the malarial and scorbutic—should not be overlooked, and that the patient should not continue drinking the water in which the original infection was possibly conveyed, or remain exposed to any other source of infection which can be removed. As regards the medical treatment, I venture to give a rough outline of the plan I adopted: Rest in bed. As much rest for the alimentary canal as is compatible with a sufficient supply of nourishment. Fomentations when necessary to relieve colic. Removal and prevention of accumulation in the bowels, and relief of engorgement by the administration of ipecacuanha, magnesium sulphate, or castor oil. When it can be borne, lavation of the large intestine by warm injections of permanganate of potash or boric acid, followed if needful by starch and opium enemata to relieve tenesmus. When the stools become fecal, gradual substitution of intestinal antiseptics—bismuth salicylate or subnitrate, salol, resorcin, naphthol. If the ulcers appear to be slow in healing, astringent injections carefully administered. Tonics, and, where possible, change of air.

In one case, in which, fortunately, injections had not been recently used, death occurred from perforation, and in other fatal cases it was evident how little was needed to produce this issue.

In severe unresponding cases, care should be taken that the patient is not weakened by too protracted a course of ipecacuanha or magnesium sulphate. It is better to have earlier recourse to intestinal antiseptics, and to interrupt this treatment by the occasional readministration of either of the above drugs, should it seem to be desirable. As to opium, I believe the less it is used the better, though sometimes it has to be resorted to, and with good effect. In all severe cases, careful attention should be directed to the circulatory system.

The few cases of hepatic abscess I have seen followed dysentery contracted in Central America. No case of hepatic abscess

following dysentery contracted in Jamaica has come under my notice, nor have I seen any indications of such in the cases examined *post mortem*. Further bacteriological research may determine the differences in type, and aid us in treatment.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CHEYNE-STOKES RESPIRATION.

THE cause of that irregular breathing, known by the name of Cheyne-Stokes respiration, has long been, and is even now, a matter of dispute. The more generally-received opinion at the present time is that it is due to contraction of the minute capillaries—or, as Sir William Broadbent puts it, to high vascular tension—and this view receives confirmation from a case of gout under my care a few years ago. When the patient, a male, came first under my observation, he had very distinct Cheyne-Stokes respiration occurring at varying intervals, and kept on passing red pepper granules in his urine. Whenever this respiration came on I noticed the urine always showed the presence of uric acid, and that when the latter was absent the breathing was perfectly natural. After some time, by careful dieting—cutting down the amount of nitrogenous food and alcohol—the uric acid entirely disappeared, and with it the irregular breathing. As a further proof that high vascular tension is at any rate one of the causes, I may mention that it is capable of being temporarily arrested by the use of erythrol tetranitrate. I have thought it fit to put these two facts on record, as they may help to clear up the question as to the cause of this peculiar symptom.

Surbiton.

F. P. ATKINSON, M.D.

PICRIC ACID IN SUPERFICIAL BURNS.

IN the evolution of wound treatment a deeper insight into Nature's way of healing breaches of continuity has led to the rejection of many methods formerly employed. Surgeons have seen that instead of hastening healing the antiseptics they employ rather retard the process, while wound treatment by aseptic methods is not applicable to the lesions produced by burns and scalds. It is obvious that an antiseptic which by its mode of action directly promotes rapid healing will give the best result on such a wound. In the lower animals and in man Nature heals large superficial wounds rapidly and painlessly under scabs. The essential in successful scab formation is the absence of all suppuration. By the use of picric acid in burns we can imitate closely Nature's method, and far from hindering the healing process we may directly assist it. The artificial scab produced by picric acid consists of coagulated albuminous fluids, reinforced by masses of detached epidermis. The scab is formed at once, thus lessening the chance of sepsis subsequently occurring under it. It has always been an axiom in burn treatment to preserve as far as is practicable the raised epidermis of the vesicles, for no dressing we may substitute can protect the underlying injured surface half so well. Picric acid preserves this layer, and by virtue of its hardening action transforms it into a large protecting scab. Healing in burns of the first and second degrees takes place rapidly without suppuration.

The technique of the method is very simple. The punctured vesicles must be accurately flattened out. No impermeable material must be placed over the simple gauze, which should be dipped in a saturated aqueous solution of the acid and applied after being squeezed fairly dry. Absorbent wool and a light gauze bandage further encourage evaporation, and thus retard the growth of any bacteria which may have gained access to the wounded surface. A pair of thin rubber gloves may be used to avoid the unpleasant staining of the dresser's hands by the acid. Renewal of the dressing need not take place for four or five days, unless there are clear signs of suppuration. The gauze is best carefully stripped off in the dry condition.

In my experience picric acid has not caused toxic symptoms either in children or adults. I venture to say that a closer examination of the so-called toxic cases will reveal the fact

that the symptoms were precisely those of septic absorption so commonly observed in grave burns under any treatment.

The advantages of picric acid in superficial burn treatment may be briefly summed up as follows: (1) Simplicity of application; (2) painlessness; (3) rapidity of healing due to—(a) epidermisation under scabs, (b) a favouring of epithelial growth, (c) a minimum of suppuration; (4) absence of local irritation, or of general toxic effect; (5) a smoother, more natural cicatrix than that obtained with other methods.

Rio Tinto Company, Spain.

IAN MACDONALD, M.D.

DISLOCATION OF ACROMIAL END OF CLAVICLE.

A few weeks ago I saw a case of dislocation of the acromial end of the left clavicle in a young man, aged 23 years. He, with several others more or less under the influence of beer, was throwing darts at a target, and had been using his right hand for about two hours. He tried to throw the dart with his left hand, when he suddenly felt a severe pain over the left shoulder, and found his left arm useless. I was at the time visiting a medical friend in Lincolnshire, where I saw the case. There was complete displacement upwards of the left clavicle at the acromial end. Broad strips of plaster by Sayre's method were applied over a pad, and the left arm confined to the side; but it was very evident that the pressure exercised had little effect in retaining the clavicle in position. The patient then drew on his braces, and we noticed that the elastic pressure kept down the bone. He was directed to tighten the left brace, and to keep quiet in the recumbent position. So good was the effect of the pressure by the elastic brace that it seemed to me this simple mode of dealing with such a dislocation was all that could be desired.

Bedford.

J. D. RECKITT,

Major, R.A.M.C.

A CASE OF MASTOID SUPPURATION WITH HYPERTYREXIA AND JAUNDICE: OPERATION: RECOVERY.

ON December 26th, 1898, I was asked by my colleague, Dr. Slater, to see E.W., aged 11, with him in consultation. The patient had been playing in the hot sun, and arrived home feeling feverish and unwell. Dr. Slater found the temperature to be 104.5°. He at first suspected sunstroke, but further investigation elicited the fact that on December 25th the patient had had an attack of vomiting, and that the week before she had had a fall upon her head. A few days later her mother noticed an offensive discharge from her left ear.

When I saw the patient at 11.30 P.M. her temperature was 108°, her pulse 180 and very feeble, but regular. There was no loss of consciousness; she answered questions rationally. She complained of headache, but had no vomiting. There was no optic neuritis. There had not been any rigor or shivering. The child looked very ill. There was marked tenderness over the left mastoid and along the whole course of the internal jugular vein, but there was no oedema or redness over the mastoid. There was pus in the external meatus of the left ear, which was not offensive. No perforation could be seen, but there was pus on Shrapnel's membrane. The right ear was normal in every respect.

After consultation with Drs. Slater and Edwards, it was decided that the case was one of middle-ear disease, probably complicated with mastoid suppuration and sinus thrombosis. It was therefore decided to explore the mastoid antrum and lateral sinus at once, and, if the latter was found to be thrombosed, to ligature the internal jugular as low down as possible. Dr. Edwards administered chloroform, which was well taken, and I performed the following operation, assisted by Dr. Slater: The usual post-aural incision was made, and the bone cleared of periosteum. The antrum was opened with the small French chisels, and a drop of pus was found in it, which was not at all offensive. The mastoid antrum was now connected with the middle ear, the facial nerve being shielded by Stacke's protector, and through drainage established. No other collection of pus was discovered. The lateral sinus was then exposed, and a small Pravaz's syringe inserted. Fluid blood was drawn out. The wound was irrigated with biniodide of mercury solution, 1 in 2,000, and plugged with 20 per cent. iodoform gauze. After the operation