and adherent that satisfactory dissection is impossible, I have divided the bands subcutaneously and stirred up the nodules freely by inserting a tenotomy knife into the scar tissue and turning it round many times. If fibrolysin is then injected, it seems that such trauma is followed by the disappearance of the nodules, precisely in the same way as occurs in the treatment of ordinary scar tissues in the skin. The flaps in the palm are then most carefully sutured with horsehair, particular care being taken to adjust them at the junctions of the cross-incisions with the main one. The hand is then put up with the wrist and fingers in the fullest possible extension on a malleable iron splint for fourteen days.

An ideal result is usually obtained; by ideal I mean a perfectly soft and supple palm, without any scar tissue in it, and with free mobility of the fingers (Figs. 3 and 4). In every case, however, the results of this treatment have proved infinitely superior to those following either the subcutaneous section, or open dissection without the use of thiosinamin (fibrolysin). And it is my belief that the method now described will prove a lasting success.

[The illustrations are taken from the case of W. H. A., aged 43 years.]

REFERENCE.

¹ *Trans. Amer. Orthop. Assoc.*, vol. xiii, p. 152.

CHRONIC INTERSTITIAL NEPHRITIS IN CHILDREN :

A BROTHER AND SISTER AFFECTED.

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ON at least one occasion previously chronic interstitial nephritis, or granular kidney, has been recorded in two children of the same parents. This is of exceptional interest in a rare disease, the etiology of which is so obscure. Of the three following cases the notes of the first two refer to a brother and sister. The former was under observation for the comparatively long period of seven and a half years, and the diagnosis was confirmed *post mortem*. The third case was only diagnosed at the autopsy.

CASES I AND II.

Family History (notes taken in 1911).—The mother has had nine children, all living, the eldest 30 years the youngest 9 years old; the first six are quite healthy and well developed, three of them are 6 ft. high. The seventh child (Case I), aged 14 years, is much undersized and stunted; the eighth child (Case II), aged 12 years, is small, but less obviously infantile; the ninth child, aged 9 years, is quite healthy, and is several inches taller than either Nos. 7 or 8. The mother volunteers the information that she was not well during the time she was pregnant with Nos. 7 and 8; but she is unable to recollect any definite symptoms, except that she was tired with overwork. A Wassermann reaction taken from the mother in 1913 gives a negative result. The father appears to be quite healthy; no history of syphilis. One specimen of urine has been obtained from each of the other children, and all were free from albumin.

CASE I.—J. L., male, first attended the out-patient department of the Derbyshire Royal Infirmary in 1905 (aged 7½ years). He had not had scarlet fever, nor any other disease. It was noted that his growth was stunted, and that he had not grown normally in the last two years. Urine, specific gravity 1010, albumin present. In 1911 there was little change. The low specific gravity of the urine and the albuminuria had continued since the time of the first observations. At this time (age 14 years) he was 4 ft. high, and weighed 3 st. 6 lb. (average height at 14 years in artisan class 4 ft. 9½ in., and weight 6 st.).¹ The want of development was very noticeable; he appeared to be about 7 or 8 years old, the external genital organs were not developed, there was no hair anywhere on the body; mentally he was quite sharp, but uneducated. There were no bone deformities; the skin was dry; the face had an earthy pallor, but he was not markedly anaemic; there were no evidences of congenital syphilis, unless perhaps a little scarring round the mouth. The urine (taking an average of many weeks) had a specific gravity of 1003 to 1006, was acid, very pale, and contained 1 part per 1,000 of albumin (not varying at all markedly with rest or exercise). The quantity of urine passed was about 6 pints per diem. There were no casts or other abnormalities; there was never any oedema. The heart appeared to be normal, the aortic second sound not accentuated; the pulse tension was quite low, and the arteries not thickened. The chief symptoms were intense thirst and polyuria. He had, at times, attacks of headache and vomiting. A course of treatment with thyroid extract was without benefit. There was little or no change

until towards the end of 1912, when his mother reported that he did not seem so well in himself. On January 4th, 1913, he attended, when he seemed dull mentally, and rather tremulous. He was admitted; he appeared rather puffy, but was not obviously oedematous; the optic discs showed some signs of old neuritis, being pale, rather blurred, and the vessels thin. He only passed about 10 oz. of urine in twenty-four hours for the first two days (containing 2 parts per 1,000 of albumin, no blood, but a few hyaline casts), convulsions developed, and uraemic coma supervened. A Wassermann test was negative. He died five days after admission, aged 15 years.

Post-mortem Examination.—The kidneys were very small, the right weighed 120 grains, the left 220 grains; the capsules stripped quite easily, there were no cysts, the surface was irregular or "granular," pale but slightly mottled; the cortex was narrow, the blood vessels were not unduly prominent. There was no dilatation of the pelvis of the kidneys or of the ureters. Microscopically there was an extreme degree of interstitial nephritis, the walls of the arterioles were obviously thickened, and the lumen narrowed. The heart weighed 4½ oz.; the wall of the left ventricle was a little hypertrophied (½ in. thick at the base), the valves were normal. The aorta was elastic and quite healthy. The brachial artery was elastic, not thickened, and microscopically appeared quite normal. The thyroid, suprarenals, brain, pituitary body, pancreas, liver, and other organs were quite healthy. The testicles were quite undeveloped, but apparently not diseased. There were no bone deformities, nor evidences of old rachitis or tuberculous disease.

CASE II.—H. L., female, first attended the out-patient department in December, 1911, aged 12 years, had suffered from thirst, headache, and some backache for about one month. The mother stated that she had always been delicate, but had no definite disease except an abscess of the thigh in 1906. The mother suggested that she thought the child had the same complaint as her brother. A specimen of urine was obtained, which showed specific gravity 1004, one part per thousand of albumin, but no blood or casts. There was little, if any, change for twelve months. In January, 1913, she was admitted, aged 13 years, height 4 ft. 1 in., weight 3st. 9 lb. She appeared much undersized; there was no hair anywhere on the body; the breasts showed no signs of development; there was nothing striking about the complexion; there were no bone deformities. The heart was normal, pulse low tension, arteries not thickened, maximum systolic blood pressure less than 100 mm. Hg (this was taken on several occasions). The urine has been between two and three pints per diem in quantity, the specific gravity between 1008 and 1012, the albumin about one part per 1,000, and no casts or other abnormalities noted. The thirst is present, but not very marked; there are no other symptoms except the retarded growth. The fundus of the eye is normal.

Six and a half years ago she was admitted to the Royal Infirmary for a "cold abscess" in the right thigh, which was incised. She made a good recovery, but it is noted in the report that the urine was examined four times; albumin was present on three occasions, and the specific gravity was constantly 1010.

CASE III.

H. S., male, aged 16 years, much undersized but not obviously infantile, was admitted for an operation for genu valgum, which condition had developed fairly recently. The urine, examined as a matter of routine, showed specific gravity 1014, but albumin was not detected. About ten days after the operation he became drowsy, gradually comatose, and died. *Post-mortem examination* (February, 1912): The kidneys were very small, weight 300 grains each; the capsules stripped easily, there were no cysts; the surface was pale and "granular," the cortex very thin; there was no dilatation of the pelvis or the ureters. Microscopically there was interstitial nephritis. The heart, aorta, and other organs were normal.

REMARKS.

The above cases illustrate several points of interest with regard to this obscure condition. From a clinical point of view the intense thirst and polyuria of Case I were most striking. It has been noted in other such cases, but at first sight it suggested the picture of diabetes insipidus, although the constant albuminuria proved that the kidneys were diseased. The stunted growth, obvious in all three cases, has usually been noted, but it was stated in a recent discussion² on this subject that a true infantilism, which was certainly present in Case I, and I think also in Case II, had only been recorded on three occasions previously.

The insidious nature of the onset of symptoms is well illustrated by Case II. A urine with low specific gravity and albuminuria were noted in a routine examination of the patient in 1906; but although the mother had Case I under her charge, it was not until 1911 that she noticed symptoms which suggested that the girl (Case II) was affected similarly. Case III illustrates the occurrence of bone deformities, which have been recorded before, and also the insidious nature of the complaint, for albumin

¹ Case II died of uraemia in March, 1913.

was not detected in the routine examination of the urine, and the diagnosis was only made *post mortem*.

High arterial tension and consequent changes in heart and arteries have usually been present in these cases, and have been regarded by some as constant. They were not recognizable in a case recorded recently,³ and in Cases I and II above they were not present to any appreciable degree clinically, in spite of the fact that they were carefully sought for. There were some signs of retinal changes in Case I, and microscopically the walls of the arterioles of the kidneys were distinctly thickened; but considering the extreme degree of fibrosis of the kidneys and their minute size, in conjunction with the comparatively long duration of the symptoms, any changes present would seem unaccountably slight. Dr. Sawyer⁴ suggests one year as an average duration of symptoms in similar cases, and notes three years in the exceptionally longer ones; but this boy had obvious symptoms, which hardly varied at all over a period of seven and a half years.

Pathologically the condition appears to be similar to other forms of interstitial nephritis, although the capsule of the kidney was not adherent in either fatal case.

In diagnosis, when the symptoms are obvious, one would suppose that cystic disease of the kidneys would be the only condition to exclude.

That so rare an affection should be met with in two children of the same parents is of extreme interest from an etiological point of view. It would seem to confirm the view that such cases may be due to some intrauterine infection, or that heredity plays some part. In these particular cases neither the results of the Wassermann tests nor any other findings would seem to indicate syphilis. In Dr. Sawyer's cases the affection was more frequent in girls. I do not know whether the suggestion has been made that a *Bacillus coli* infection might produce this disease. The right kidney in Case I was more affected than the left, which has been noticed in *coli* infections. There was no dilatation of the pelvis or ureters, which, present in some cases, has suggested gravel or calculi as a disposing cause.

I am indebted to Mr. Luce for leave to publish Case III, which I only saw *post mortem*.

REFERENCES.

¹ Allbutt and Rolleston's *System of Medicine*. ² *Proc. Roy. Soc. Med.*, Dr. Miller, December, 1911. ³ *Ibid.* ⁴ *Chronic Interstitial Nephritis in Children*, *Birmingham Review*, 1903, Dr. J. E. H. Sawyer; also *St. Thomas's Hosp. Rep.*, 1906.

YEAST INFECTION IN CHILDREN.

BY

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EALING, W.

AN infant, 4 months old, was said to be always crying. It was a big child, but thin, pale, and peevish-looking, and sucking a comforter. It had been ailing for about two months. There was a history of frequent motions, which were seldom watery, but often jelly-like. The mother's milk had been scanty from the beginning, and after the first fortnight breast milk was given at night only. During the day a mixture of barley water and cow's milk was used. Examination revealed little beyond an inflammation of the perineal region. The mouth showed no sign of stomatitis.

A swab from the tongue and a loopful of freshly-passed motion were smeared on malt extract agar. After twenty-four hours, at 37° C., the latter showed confluent colonies of the thrush fungus along its whole length. Only a few discrete colonies appeared on the smear from the mouth. Appropriate treatment soon gave a satisfactory result.

Stomatitis due to the thrush fungus is familiar to every one, and even a marked attack may not greatly upset an infant. The source of infection is the mouth of the mother or nurse, and a comforter is often the carrier. Along with stomatitis or following it, or, as in this case, without definite stomatitis, the fungus may be associated with troublesome intestinal catarrh and be present in the motion to the number of one million cells per gram.

On culture media the organism often appears in its

yeast conidial form only, and may be mistaken for a saccharomyces. Thus, on isolating it from inflamed gums, Mr. K. Goadby named it *Sac. neoformans*. On meeting with it in a case of sore throat, Mr. A. G. R. Foulerton named it *Sac. tumefaciens albus*, and described it at length.¹ Grown in litmus milk or beer wort at 20° C. to 22° C. for a week, it appears in chains of elongated cells, with yeast conidia round the septa. The common form in London ferments maltose, but neither saccharose nor dextrin. Less common is one which ferments the three. Both forms liquefy glucose gelatin within one month, but they never ferment galactose, lactose, or raffinose. In textbooks it is still sometimes stated that the nature of this fungus is not understood. The work of Reess, Hansen, and Zopf set the matter at rest twenty-five years ago, and the latter named the organism *Monilia albicans*. Since then a French mycologist has referred it to a higher group of fungi, but it is certain that the organism with which he worked was not the common thrush fungus at all. Moreover, his work has not been confirmed.

REFERENCE.

¹ *Experimental Blastomycosis*, *Journ. Path. and Bact.*, 1893.

SALICYLIC IONIZATION IN ACUTE PERICARDITIS.

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THE value of salicylic ionization in some forms of pleurisy has already met with some appreciation by the profession. The following case apparently shows that it is also useful in acute pericarditis.

A thin, delicate girl, aged 18, developed acute rheumatism after a quinsy, and in the course of the attack acute pericarditis appeared. The pain was severe, the patient spent the whole of one night in a position of complete orthopnoea and was quite sleepless. The next day salicylic ionization was tried, the active electrode in the form of a pad soaked in a 2 per cent. solution of sodium salicylate being placed over the precordium and the indifferent electrode on the back. A current of 40 milliamperes was used for about half an hour, and had not run many minutes before the patient declared herself eased. At the end of the session the patient lay back on her pillow and slept soundly. The ionization was repeated on subsequent days, and the symptoms of pericarditis gradually subsided; aceto-salicylic acid was also being taken by the mouth. It is difficult to believe that the great and rapid relief afforded in this case was due merely to tissue-ionization by the galvanic current or to its moral effect. The patient was a favourable subject for the treatment, the thinness of her chest-wall offering a reasonable expectation that the salicylic ions could be made to penetrate to the requisite depth.

The benefit of salicylic ionization in joints the subject of acute rheumatism or sprain is well established, and the resemblance between the pathology of the pericardium and that of the synovial sac of a joint is an axiom of pathology.

FRACTURE of the clavicle, especially when incomplete, is not always easy to detect in the newborn. Sometimes it is not betrayed until the callus around the seat of fracture causes pressure effects. Dr. Azema, of Toulouse (*Bulletin de la Soc. d'Obstét. et de Gynéc. de Paris, etc.*, May, 1913, p. 530), has noted two instances of this condition, though in one there was strong evidence that the injury occurred a few days before delivery. The possibility of intrauterine fracture has always to be taken into account. Dr. Azema likewise reports a fatal case of osteomyelitis developing in the fractured bone through infection from an inflamed umbilicus. *Post-mortem* examination revealed an umbilical abscess not communicating with the peritoneal cavity and general peritonitis. In this case an obstetrical fracture of the clavicle became infected from a focus elsewhere, a common seat of infection, which was noted at birth and treated appropriately by the medical officer and nurses of the maternity clinic in Toulouse where the child was born.