

congenital or intra-uterine cretinism, cretinoid dysplasia, osteoporosis, osteospathyrosis, periosteal dysplasia with osteospathyrosis, and defective enchondral ossification. Ballantyne has adopted the nomenclature which Kaufmann made use of and makes accordingly a distinction between the following subdivisions of chondrodystrophia foetalis—viz. : (1) hyperplastica; (2) hypoplastica; and (3) chondromalacica. The typical appearances of these three different diseases have been sufficiently clearly given by Kaufmann and Ballantyne.<sup>3</sup> I will therefore without delay settle the question which I have undertaken to explain.

Since Virchow first described a specimen of chondrodystrophia foetalis hypoplastica and came to the conclusion that it was a "new-born cretin,"<sup>4</sup> there has been the utmost difficulty in separating this disease from cretinism, especially as nobody dared to question Virchow's authority on the subject—in fact, the greater part of the following cases were described as "cretinism" and some authors went even so far as to refuse to acknowledge undoubted cretins as such when they did not present the features of Virchow's famous "neugeborne cretin." Having had by lucky chance the very identical specimen of Virchow in my possession I proceeded to make slides of the epiphyses and found on examination, as I expected, at the junction with the diaphysis a layer of connective tissue continuous with the periosteum. This was sufficient to stamp the case as chondrodystrophia foetalis hypoplastica. In the bones of cretins one never finds such a fibrous cap over the end of the diaphysis; the bones of cretins have only this peculiarity—viz., that their ossification takes place exceedingly slowly, exactly as with infantile myxoedema and infantile dwarfs—i.e., dwarfs whose puberty is greatly retarded. In one of my previous papers I was able to give the radiographs of the hand of a patient, aged 12 years, suffering from infantile myxoedema in whom the ossification corresponded to the conditions of a child scarcely three years of age. In the museum of the clinique here there is the skeleton of a cretin who was 32 years old and whose pelvis is separable into the three parts (*pars sacralis, iliaca, et publica*) which begin to be united at the age of six years. Even microscopically there is no great difference to be found between the bones of children whose real age corresponds to the apparent age of the cretins. The identity, from an etiological point of view, of sporadic and endemic cretinism and myxoedema has long ago been settled through Semon and Kocher, and if this fact has not had the unanimous agreement of all authors it is simply owing to the opinion that the small stature of endemic cretins was due to their cartilages becoming too soon ossified. The x rays have now shown the contrary to be the case, so that nowadays no serious objection can be brought forward to shake Semon and Kocher's theory. Cretins, sporadic and endemic, are nothing more or less than undeveloped children with the typical puffiness and intense apathy of myxoedema. On the other hand, cases of chondrodystrophia foetalis, if they happen to grow up, which, though rarely, does sometimes occur, are as regards mental faculties perfectly normal and on a par with their surroundings and differ from other people only in this—viz., that their legs and arms are very short and stunted.<sup>5</sup> This shortness is simply caused through the above-mentioned strip of fibrous matter pushing itself between the diaphysis and the epiphysis and thereby putting a stop to further growth of the bone shafts. These points would be already sufficient to make a relation between cretinism and chondrodystrophia improbable. To this must be added that though up to the present time one has always found unquestionable pathologic changes in the thyroid gland of all cases of cretinism which have been carefully anatomically examined, this has never been so in the case of chondrodystrophia foetalis.

I must now mention the experiments of Hofmeister, as they have often enough aroused the opinion that chondrodystrophia and cretinism bear some relation to each other. Hofmeister performed thyroidectomy on several rabbits of various ages and found that in the diaphysis of the operated animals the cartilage cells, instead of being arrayed in regular rows as usual, were apparently thrown about in the field of view. As this is also to be seen in chondrodystrophia foetalis he came to the conclusion that this disease after all

was only one dependent on loss of function of thyroid gland—i.e., cretinism. To this point the following objection must be raised, that the typical layer of connective tissue, continuous with the periosteum, never appeared at the junction of the diaphysis and epiphysis in any of the animals upon which he experimented, and that, moreover, a certain degree of "désarroi" does appear in the rows of the cartilage cells in all diseases of the bones without being typical for any one of them.

In conclusion, from all we know up to the present time of the function of the thyroid gland we must deduce that its loss brings on (1) general arrested development and (2) myxoedema. Both of these symptoms are wanting in chondrodystrophia foetalis, in which disease we find simply short arms and legs, probably following inflammation of the cartilages during intra-uterine life. None of this is to be found in cretinism, therefore the two diseases are distinct units.<sup>6</sup>

## Clinical Notes:

### MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

#### A CASE OF PNEUMOTHORAX WITH RAPID RECOVERY.

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THE following case, owing to the unusual course it ran, seems to me to be worthy of record.

The patient, who was a man, aged 38 years, was admitted to the City of London Hospital for Diseases of the Chest on Oct. 21st, 1903, suffering from difficulty in breathing. The history he gave was as follows. He had been attending as an out-patient at the hospital since 1897 for cough, expectoration, and occasional hæmoptysis, but with the exception of one interval during which he had been an in-patient at the hospital he had been able to follow his occupation as a clerk. Until some ten days before admission he had been in his usual health, but about that time the cough returned and there was also a little blood-stained expectoration. On Oct. 17th, after a violent fit of coughing, he noticed himself becoming short of breath and about the same time he felt a "tapping sensation" behind the sternum and also heard a noise inside his chest on the left side which he compared to the sound of a pot boiling. On the 18th he felt the dyspnoea becoming worse and on the 19th it was so bad that he could not go to his work, although he attempted to walk there. He then sent for a medical man who advised him to seek treatment at the hospital.

At the time of admission his general strength was fairly good and, though he complained of dyspnoea and could not lie on his left side, he was not suffering from much distress. On examination of his chest some impairment of movement was observed on both sides, but while the right side showed some power of expansion, on the left side there was merely an elevation of the thoracic wall when he breathed deeply, no definite expansion being present. On palpation of the left chest behind vocal fremitus could be made out from the apex to the base over an area of three or four fingers' breadth parallel to the spine; over this area the percussion note was found to be impaired, the breath sounds were somewhat harsh, and vocal resonance was present. On palpating and auscultating over the remainder of the left chest it was found that vocal fremitus, vocal resonance, and breath sounds rapidly diminished and were soon lost as the examination was made at a short and then at a moderate distance from the areas of diminished resonance, but on percussion over this portion of the left chest the note was hyper-resonant. On examination of the heart the apex beat was not palpable; no area of cardiac dullness could be mapped out (being replaced by a hyper-resonant note) and

<sup>3</sup> Brit. Med. Jour., Sept. 27th, 1902, p. 951.

<sup>4</sup> Gesammelte Abhandlungen, p. 975, Fig. 36.

<sup>5</sup> It will interest the readers of Dickens's works to be informed that Miss Mowcher in "David Copperfield" is a typical case of adult chondrodystrophia hypoplastica.

<sup>6</sup> I also believe that the "Cretinism in Calves," which Seligmann describes in the Journal of Physiology, 1903, vol. xxix., is only chondrodystrophia foetalis after all.

the heart sounds were very faintly audible to the right of the sternum. On the right side there were signs of consolidation of the apex in front and doubtful cavity signs behind. The interpretation of the physical signs on the left side was as follows. The presence of breath sounds, of vocal resonance, and of fremitus in the dull areas mentioned above showed the presence of lung in those areas; their absence over the hyper-resonant area suggested the absence of lung in that area. In other words, the left lung was in a state of collapse and the hyper-resonant note suggested that air was the cause of the collapse, especially as the area of cardiac dullness was replaced by hyper-resonance. But for air to cause a collapse of the lung it must be free in the pleural cavity; there was no external wound and so it could not have reached the pleura from without, consequently it must have done so from within. There was nothing to suggest that an air-containing viscus in the abdomen had opened into the pleura but there was evidence of lung disease, so it seemed that the free air had escaped from the lung into the pleura and so caused the collapse of the lung—in other words, the case was one of pneumothorax. An x-ray examination made by Dr. Hugh Walsham showed the left lung to be collapsed against the spine and also showed transmitted pulsation, and a transparent area corresponding to the air free in the pleural cavity could be made out. Dr. Walsham also took an x-ray photograph which showed (1) the displacement of the heart and mediastinum to the right side and (2) the line of collapsed lung and the transparent area extending from the apex to one of the lower ribs. The diagnosis of pneumothorax was therefore confirmed.

The patient was kept in bed and his symptoms rapidly changed for the better, so that he was able to leave the hospital much improved after a stay of six weeks. A week after admission another x ray photograph was taken<sup>1</sup> and it showed a return of the heart to almost, but not quite (as could be demonstrated by percussion), its normal position; it also showed the re-expanded lung with tuberculous infiltration and a small cavity at the extreme apex. The breath sounds, the vocal resonance, and the vocal fremitus could also be made out all over the left thorax, proving therefore that the lung had expanded. In addition to the above it was noted that in the upper quarter front and back the vocal resonance and the vocal fremitus were more marked than normal and there was prolongation of expiration with some medium-sized râles showing that this part was already infected. On the right side there was not any change of importance to note.

The following points in the case are worthy of special attention.

1. It is interesting to note the comparatively small amount of distress that the patient had. This might be explained in two ways: either the opening in the pleura was valvular and allowed small quantities only of air to escape at a time or else the pneumothorax was only an incomplete one.

2. It is also interesting to note the extreme rapidity of recovery, the patient's mediastinum having regained nearly its normal position at the end of the week. This observation was verified by Dr. Harrington Sainsbury and Dr. Walsham.

3. Another point of interest is that there was no evidence of fluid, for there was never any splashing nor could any fluid be made out by means of the x rays.

4. The case illustrates how important it is in the diagnosis of chest disease to recognise the dislocation of the various thoracic viscera. The diagnosis in this instance largely rested on that fact. The bell sound was entirely absent throughout the case.

I have to thank Dr. Sainsbury for permission to publish the case and also Dr. Walsham for the x-ray photographs.

#### A CASE OF FRACTURE OF THE SKULL BY CONTRE-COUP; RECOVERY.

BY ANGUS E. KENNEDY, M.R.C.S. ENG., L.R.C.P. LOND.

GENUINE fracture by contre-coup is rare and recovery after it is so rare that the following case seems worth putting on record.

In the early part of 1903 a boy, aged 12 years, at Cleggan in Co. Galway was kicked by a horse over the right coronal

suture; a compound depressed fracture resulted and the orbital plate of his right frontal bone was torn from the orbital margin and its sharp edge could be felt below the upper eyelid under the protruding conjunctiva. Two months after the accident he was brought to London by the kindness of Sister Katherine and I saw him. His cerebral functions were at that time perfect so far as could be discovered. On the vertex there was a depression with a stellate scar. His upper right eyelid bulged and pulsation could be seen through it. Below the lid the protruding conjunctiva could be seen and the sharp orbital plate could be felt under it and could be moved up and down. The globe lay over the lower lid disorganised but intact and was almost hidden by the conjunctiva. I carefully excised the globe and the protruding conjunctiva, but did not expose the actual edge of the orbital plate, as I saw no way of fixing it or of preventing subsequent hernia cerebri.

The result is very good; the upper lid has sunk back and the pulsation is no longer visible through it though it can be felt; the brain seems to occupy the whole orbit and the appearance is like that of a boy with exaggerated ptosis.

Plaistow, E.

#### A NOTE ON THE TREATMENT OF SCIATICA.

BY ARTHUR H. BOSTOCK, L.R.C.P. LOND., M.R.C.S. ENG.

WHILE house physician at St. Bartholomew's Hospital I was much struck with the number of cases of sciatica which were not amenable to ordinary methods of treatment and the object of this note is to recommend the use of a remedy to which I have now given a thorough trial. It has been of most use in the cases of true neuralgia, which in my experience are the commonest, but it has not acted quite so well in the cases associated with a rheumatic diathesis. The drug is phenalgin (ammonio-phospho-phenylacetamide), prepared in two and a half grain tablets by the Etna Chemical Company, New York, and is obtainable in England, for dispensing purposes only, from Mr. E. J. Reid, 11, Dunedin House, Basinghall-street, London, E.C. The dose is from five to 20 grains and I find that this substance so given has no depressing action on the heart, neither does it expose the patients to the risks incurred in the use of such analgesics as opium and morphia. When a case is in the acute stage the patient should be placed in the recumbent position and poultices should be applied locally. A commencement should be made with phenalgin in a dose of ten grains, repeated every three hours. After the first 24 hours, if the drug is acting, I reduce it to ten grains (four tablets) three times a day and next day to three tablets (seven and a half grains) three times a day. I then leave a few tablets with the patient to take a dose of ten grains should the pain show a tendency to recur. In my experience doses consisting of less than three tablets (seven and a half grains) are of no use at all.

Chichester.

## A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

#### QUEEN'S HOSPITAL, BIRMINGHAM.

A CASE OF AN UNCOMMON FORM OF SPINA BIFIDA.

(Under the care of Mr. W. BILLINGTON.)

FOR the notes of the case we are indebted to Mr. Frederic Barker, house physician.

The specimen which the accompanying illustration depicts was taken from the body of a male child, aged seven months, who was admitted to the Queen's Hospital, Birmingham, under the care of Mr. Billington, for the purpose of having a small tumour removed from the upper dorsal region of the

<sup>1</sup> The paper was accompanied by two admirable skiagrams which if reproduced would have occupied a considerable space. They quite corresponded with the description of them given by the author.—ED. L.