bacilli, would leave little room for doubt on this score. The absence of any previous chronic disease of the lung should preclude the existence of bronchiectasis or abscess.

In conclusion, we may affirm the existence of a subacute lobar pneumonia distinct from the acute classical type, characterised by a tendency to fibrous and necrotic changes in the lung. The indurative process may be mainly or exclusively interstitial, it may be represented wholly or in part by organisation of an alveolar exudation, or it may comprise both of these lesions. It is possible that these anatomical differences imply a corresponding difference in etiology; but further analysis is not as yet in our power, and, for clinical purposes, both forms may be included under the title "indurative pneumonia," which indicates the characteristic feature common to each.

SCIENTIFIC STUDY OF THE CONDITION OF CHILDREN IN SCHOOLS.

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I PROPOSE to consider the possible value of accurate observation of facts seen in children in schools, as a means of aiding the solution of educational problems and assessing the value of educational work and certain possible means of improving it. It is needless to argue that public benefit has resulted from the employment of scientific methods in connexion with sanitation, food supply, manufacture, travelling, &c., while some training in science is now thought necessary for the workers in many trades. In education the teaching of science subjects is justly valued as a means of producing mental culture. The professions of law, the army, and art do not ignore aid from science; why should not the professional teacher have the benefit of precise knowledge as to the bodily and brain condition of his pupils—the material upon which he works? There is at present but little accurate scientific observation of children in schools, from the point of view of ascertaining their special adaptations to and requirements in education. It remains for our profession to systematise the scientific study of children from the point of view of methods of education, and to put such results before teachers and others responsible for national and private education. In systematising such scientific work as it may be conducted in a large school, without use of the processes of the consulting-room, only methods of observation by sight can conveniently be employed. What signs shall we note, and what relative value is to be assigned to each? Looking upon a body of children as pupils in a school, we would wish to classify them according to their (1) development, (2) nutrition and physical health, (3) brain condition. The grosser forms of low development of the body have many times been ably described by many authorities on imbecility, and the relative value of various defects of skull, the features, &c., has been fairly determined; all these may be seen in less degree in school children. I will not dwell further on this group of signs now. As to indications of the brain condition, these may be observed with equal facility by noting the balance and action in the various mobile features and parts of the body. Having previously fully described these signs in works published,¹ I will not attempt even to epitomise them here; they may easily be learned by any observer; but, like all new physical signs, they require some moderate degree of application to recognise them. It is not, however, my desire at present to urge any one system for use in observing children in schools, but to dwell on the importance of obtaining scientific knowledge as to the physical and brain condition of our school population. The late Royal Commission on Blind, Dumb, and Exceptional Children could obtain no body of statistics as to pupils in school, showing how many were defective or feeble in brain, ill-developed, ill-nourished, nervous, mentally dull, or epileptic, &c. There are 6,000,000 children in schools under the control of the Education Department. How many are

unfitted for education under the code, who are of low-class make, the percentage of nervous children in the schools, and the distribution of each class? These are questions worthy of investigation. The effects of education and various modes of teaching upon the brains of the children can only be determined by actual observation in the schools. We have large bodies of statistics bearing upon disease, its causation and distribution, and upon pauperism, crime, non-employment, &c., but there is no body of facts founded upon extended observation of school children showing their condition, and its bearing upon the adult population of the next decade. What is wanted is a careful investigation conducted by observation of the children along definite lines, as well as by inquiry of the teachers. It is only by an extended body of facts obtained in various schools and in different localities in town and country that the average condition of children can be known. I think, from my own observations, that there are more nervous, over-mobile children in London than in northern towns, and fewest cases among the resident pauper schools, while the latter and certified industrial schools contain a high percentage of low conditions of development. At present we have no standard to go by, no average of the conditions we desire to remove. It is desired by all educationists that educational methods should be adapted to the special requirement of the school. The corporate character of a school depends upon the percentage of the different classes of pupils present; similar methods are not adapted for a school with 10 per cent. nervous children, and 1 per cent. of cranial abnormalities, as compared with another school with 2·7 per cent. nervous children, and 4·1 per cent. of cranial abnormalities. (Compare in report quoted Stockwell Practising School and Hanwell National School.) The efforts of a few medical men have produced a report² of the condition of nineteen schools containing about 6000 children; this illustrates, better than any summary I can give here, the kind of information that such inquiry may elicit, and the uses to which it may be put. The study of pathology and clinical diagnosis must precede scientific treatment, and we need some exact knowledge of the condition of samples of the school population before science can take its proper place in directing education, or give due service to the State by advice upon many of the practical problems put forward by the educationist for solution.

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NOTE ON A CASE IN WHICH THE ILIUM WAS TREPHINED FOR ILIAC ABSCESS.

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THE following note shows the good effect which may follow trephining the ilium in suitable cases. Cases of this description are not, however, common. The practice may be expected to be useful when a collection of pus exists under the iliac fascia, and when this collection is circumscribed and limited to the fossa. Pus in this position, when left untreated, will probably pass under Poupart's ligament, and point in the upper part of the thigh extended to the femoral vessels, thus simulating psoas abscess. If they are now opened, or if they burst, a long sinus will be left which will take a considerable time to heal. The direct opening made in the case about to be mentioned apparently avoided this complication, and led to a speedy cure. Possibly this treatment may be of use in cases of abscess in the iliac fossa above the fascia; but I think this is doubtful. The experience of one case is not of much value, but as the treatment adopted is novel, it is given for what it is worth. I am indebted to my house surgeon, Mr. J. J. Mitchell, for the following notes.

C. A—, aged eighteen, was admitted into the Leeds Infirmary, under the care of Mr. McGill, on May 6th, 1889, complaining of pain in the right iliac region and right thigh. In 1884 Mr. McGill excised her right hip-joint for disease of long standing. She recovered quickly after the operation,

¹ The Children: How to Study Them. F. Hodgson, 89, Farringdon-street, E.C. Lectures on the Growth and Means of Training the Intellectual Faculty. Cambridge University Press.

² Report of a Committee of the British Medical Association on Observation of Children in Primary Schools. Published by the Cambridge University Press.

and had been able to walk long distances without pain or discomfort until three weeks before admission. She then became feverish, lost her appetite, felt ill, and was seized with violent pain in the right hip and thigh. She was confined to bed, and, as the symptoms increased in severity, she was brought to the infirmary.

On admission, she was seen to be a well-nourished and healthy looking girl. There was a large scar over the right hip at its posterior aspect, but there was no sinus or fulness in this position. She complained much of pain, which extended downwards from the hip to the knee. This pain was not aggravated by moving the thigh. No fulness or special tenderness could be found in the iliac fossa. Her temperature varied from 99° in the morning to 101° or 102° in the evening. A small weight was placed on the leg, with the effect of somewhat easing the pain. Her condition remained unchanged for three weeks, when deep fluctuation was detected in the right iliac fossa. On May 27th this was aspirated, and six ounces of sweet pus were withdrawn. Aspiration was repeated on May 30th, and four ounces of pus were removed.

On June 4th, the temperature being still hectic in character, Mr. McGill opened the abscess above and behind the anterior superior spine of the ilium. A considerable quantity of pus, which could not be measured, escaped. On passing the finger into the abscess cavity a piece of the iliac fossa the size of a sixpence was felt to be denuded of periosteum. Over this spot, situated five inches below and behind the anterior superior spine, a transverse incision was made, dividing the skin and glutei muscles down to the bone. A three-quarter-inch trephine was applied, and a portion of bone this size, including all that was bare of periosteum, was removed. The abscess cavity was thoroughly scraped in all directions, and freely irrigated with a solution of perchloride of mercury. A drainage-tube large enough to fit exactly into the trephine opening was inserted, and the wound above the iliac crest was closed with sutures. A large antiseptic wool dressing was applied.

The after-progress of the case was in every way satisfactory. There was a copious serous discharge, which necessitated frequent changes of the dressings for forty-eight hours. The temperature dropped to normal on the second day, and never again reached 99°. On June 21st a small tube was substituted for the large one, and on July 1st this was removed. On July 4th, a month after the operation, the wound had entirely healed. She left the infirmary shortly afterwards, and was seen at the end of October perfectly well and doing her work as usual.

Leeds.

TWO CASES OF CHEYNE-STOKES RESPIRATION IN CHRONIC BRIGHT'S DISEASE,

IN ONE OF WHICH THAT SYMPTOM WAS RECOVERED FROM.

BY LAWFORD KNAGGS, M.C. CANTAB.

THE interesting case communicated to the Clinical Society by Dr. Samuel West, and the question by Dr. S. Mackenzie as to whether any Member of the Society had seen a case of Cheyne-Stokes breathing, not due to brain injury, that had recovered, encourage me to record the following cases. At the time the first case was the only one of chronic Bright's disease in which I had ever seen Cheyne-Stokes respiration occur without some obvious cerebral injury, and the only instance that I was aware of in which that symptom had been followed by recovery. The second case occurred shortly after, and the two together present such a combination of interesting facts that they seem worth recording, either as a contribution to our knowledge of chronic Bright's disease, or of Cheyne-Stokes respiration, or of family proclivity.

CASE 1.—W. E. S—, aged fifty-six, a farmer, had been, so far as he was aware, a healthy man till he took cold at the end of March, 1889. He had been seen by two different medical men, and placed under my care by one of them. On April 2nd, when I saw him for the first time, his condition was much the same as it had been for three or four days. His chief complaint was "shortness of breath," and that he could not get any sleep. He had

Cheyne-Stokes respiration of a most marked character. The pauses measured twenty seconds, and these were followed by from thirty to forty respirations, being shallow and slow at first, becoming deeper and deeper and quicker and quicker, and then gradually waning until they ceased. He was propped up with pillows in an upright position, and during the pause he would fall into a doze, from which he was roused by the hurried breathing, which evidently distressed him greatly, and caused an intense feeling of dyspnoea and impending suffocation. Good respiratory murmur could be heard all over both lungs. There was a soft cardiac murmur at the apex (which was normal in situation), but whether of endo- or peri-cardial origin was a little uncertain. Beyond this there were no abnormal physical signs. Urine: sp. gr. 1018; albumen one-quarter to one-third; no sugar; small uric-acid crystals and epithelial and granular casts in abundance. Under half-drachm doses of paraldehyde ordered three times a day, but not given quite so often, he speedily got good sleep, and the Cheyne-Stokes respiration disappeared gradually but completely in the course of three or four days. He seemed to be doing well. The tendency to sleep, however, increased until on the 10th and 11th of April it deepened into stupidity, and finally into semi-coma, from which he could be roused and made to give unintelligent answers. Vigorous but not very successful efforts had been made to produce free purging with compound jalap powder, elaterium, and white mixture in large and repeated doses, and on the 11th and again on the 12th one-third of a grain of pilocarpine was injected under the skin, and followed by vomiting and free sweating. He now began to improve, the uræmic symptoms gradually passed away, his mental state was completely restored, he had good nights, and was not drowsy during the daytime; his appetite was good, and his bowels acted well. The quantity of urine passed in twenty-four hours had been fairly constant throughout (about forty ounces), but the quantity of albumen began to diminish at the beginning of May, and remained at about one-tenth. Pulse 72. He began to get up early in May, and got downstairs about a fortnight later. He wished to go out of doors, but the weather was too treacherous for the idea to be entertained. During the whole of May and the first two weeks in June his condition was extremely satisfactory, and he gained flesh and strength. Whit Monday, June 10th, was remarkable for a very bitter damp east wind, and it is probable that he caught cold on this day. At my next visit I noticed his pulse was quicker, and the amount of albumen largely increased. He was sent to bed and kept there, as he thought unnecessarily, and gradually the albumen diminished. The week preceding July 15th he had had a little wheezing at night and been troubled with flatulence, but on that day he was better; pulse 102. On July 16th there was a violent thunderstorm which seemed to have an extraordinary effect upon him. He was very excited by it, and afterwards the breathing got worse and the respirations became irregular. Pulse 120. The paraldehyde was repeated. On the 17th he had had a restless night. Pulse 120. There was Cheyne-Stokes respiration, the paroxysms lasting forty seconds and the pauses ten seconds. Many of the respirations were of equal depth. During the paroxysms he was very restless, but said he felt quite well except for the short breathing. On the 18th he was better, having had a more comfortable night. The respiratory spasms were made worse by excitement and worry. On the 19th he was cold, with pallid lips and Cheyne-Stokes respiration. He was much the same on the 20th, but on the 21st, after a better night, the breathing was much quieter. The respirations were rhythmically irregular and there were no pauses, and the periods of laborious breathing were short. Pulse 100. On the 22nd rhonchi were present over both lungs. On the 23rd there was slight improvement. He had had a good night. Cheyne-Stokes breathing came on occasionally at intervals of several hours. There was a soft to-and-fro pericardial sound at the apex, and also a systolic endocardial murmur. On the 24th there were tracheal râles, and he passed his urine involuntarily. Mentally he was tolerably clear. The tongue was dry and brown, and respiration again rhythmically irregular, but without pauses. On the 25th he was semi-comatose, but could be roused to say he was "pretty fair"; the evacuations were passed involuntarily, and on the 26th the coma deepened and he died.

CASE 2.—The interest of W. E. S—'s case does not stop here. During the course of his illness his sister, Mrs. S—, aged forty-six, living near, came under my care for some