was that extreme rapidity on the part of the surgeon became unnecessary. He could now, for the first time, take time enough to be careful and minutely painstaking as to details. Another and less obvious result was the improvement of nursing which the abolition of pain made possible. While all surgery was torture scarcely less terrible to see than to bear, only women of unusually strong nerves were likely to place themselves in the way of having to witness, almost daily, suffering on that scale. At the time of the Crimean war this effect of the milder methods of treatment was just beginning to be felt; and the enthusiasm called forth by Miss Nightingale's services at that time expressed itself in the adoption of nursing as a profession by many women who would not, I think, have entered hospitals in the pre-anæsthetic days.

"The influence of the discovery of anæsthetics on research work has also been immense and far-reaching. Very little of that which we now know for certain as to the action of drugs, of physiology, of bacteriology could have been arrived at had we been without the aid of anæsthesia. It is because it has made antiseptic surgery, good nursing, and medical research work possible that I put Morton and Simpson's discovery in the forefront of all that we have gained in the Victorian era."

Immediately resulting from the discovery and general use of anæsthetics was the remarkable advance in abdominal surgery, beginning as it did with the revival of ovariectomy. Ovariectomy, Mrs. Anderson observed, was waiting for three things, without which it could not advance to its full measure of success and usefulness. It needed anæsthesia; it needed a man with the qualities of mind and temperament which should fit him to win for it the sanction of the medical profession and of society at large; and it needed, perhaps most of all, the new light upon the conditions which led to success in peritoneal surgery which the world owed to Lord Lister. In England especially the victory over opposition to the operation was chiefly due to Spencer Wells, whose honesty of purpose was appreciated by the profession, and whose courage and cheerful optimism communicated themselves to the patient.

Referring next to the rise and development of the antiseptic method of the treatment of wounds which was due to Lord Lister and which would for ever be accounted one of the greatest glories of the Victorian age, Mrs. Anderson said: "The beginning of the search for antiseptics may, I think, be dated from Sir James Paget's wonderful address in 1862 on the *Treatment of Wounds*. In it he appealed to his hearers not to be content with the existing state of things; and, as usual, noble discontent resulted in the slow and laborious working out, by the aid of many minds, of a better way. Sir James Paget spoke especially of 'the sore plagues of surgery,' septicæmia, pyæmia, and erysipelas, and of the supreme value of 'repose and cleanliness,' and of the difficulty of getting either, and more especially 'cleanliness' in a surgical sense. He thought surgeons should be content 'to keep out mischief, always a very difficult task,' and he added these significant and almost prophetic words: 'I can only suspect that there are yet some things hidden.' We know now that in 1862 almost the whole of bacteriology was hidden. It is probable that Paget's words of weight directly influenced Professor Lister, and stimulated him to start his researches into the means at our command for 'keeping out mischief' and for providing cleanliness for wounds."

Lister had, in 1867, first formulated his view that putrescence in wounds was a process resembling fermentation, like it due to the presence of micro-organisms, and to be prevented by keeping them out or by destroying them. It was one of his marks of distinction that he had always been searching for improvements in the method, so that though his idea did not vary his method of reaching the ideal did. During the past thirty years the methods had been made progressively simpler, while the doctrine on which they rested had been universally accepted.

The history of the progress of midwifery was very similar to that of surgery. Semmelweis, who had made it certain that puerperal fever was mainly due to the inoculation of the patient with poisonous matter by the hands of the accoucheur or nurse, and that this mode of infection could be absolutely prevented, had never received the honour which was his due. The effect of antiseptics in midwifery practice was in fact more

easily measured now than in surgery, because it was possible to compare the mortality statistics under the two contrasted conditions. Without antiseptics the risk of septic infection was enormously on the side of hospitals; with them the relatively greater risk was transferred in almost a greater degree to the other side, namely, the cases occurring in ordinary family practice. "The responsibility," Mrs. Anderson continued, "of not taking the precautions in private practice which have all but removed puerperal fever from the causes of death in lying-in hospitals, is very great, and one that no one ought to have the temerity to accept."

After a brief reference to the use of antitoxins, and to the existence of internal secretions and the therapeutic uses to which knowledge of this nature had been put, Mrs. Anderson concluded by asking her hearers to consider in what direction further progress was most wanted. "I think we may say that surgery and midwifery have had their turn, and that it is in medicine proper that more light is specially needed. We want, in medicine, more of the knowledge that can only be gained through research. We want to know the real nature of malignant growths, the complete life-history of the bacillus of diphtheria, of the parasite of malaria, the conditions they require, and how to produce immunity from them and from tuberculosis. It does not need much imagination to realise how the world would be helped and its sorrows lightened if cancer, consumption, and diphtheria could be brought under control in at all the same measure as small-pox, thanks to Jenner, has been brought; nor how civilisation would advance by leaps and bounds in many parts of the world if malaria could be effectually combated. Victory in these directions can only come through patient and laborious research, and we should all do our best so to educate public opinion that the true value of this work should be generally recognised, and that the demand for it should no longer be restricted within the narrow limit of the world of science."

ACQUIRED CRETINISM OR JUVENILE

MYXŒDEMA.

By WILLIAM RUSHTON PARKER, M.A., M.D.CANTAB.,
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CRETINISM is the result of loss of thyroid action in youth, and varies in proportion both to the extent of the loss and to the degree of youthfulness. Three varieties may be distinguished both etiologically and pathologically. In one the thyroid is embryologically not developed, or very partially developed, the cause being presumably akin to that which brings about any other embryological deficiency, such as acardia, acephalia, anencephalia, absence or abortion of uterus, ovaries, or testicles. In a second the thyroid undergoes the same changes as in endemic goitre, and doubtless from the same cause, any differences being due to loss of thyroid function. In a third the thyroid, after functioning healthily for a time, atrophies, doubtless from causes akin to those of adult myxœdema. This third variety may be distinguished from congenital cretinism and from goitrous cretinism by the term acquired (non-goitrous) cretinism or juvenile myxœdema. A few examples may make this variety clear.

1. A young man, under Dr. E. Hertoghe,¹ of Antwerp. Growth stopped without apparent cause at the age of 12. At the age of 27 his voice was childish, his face beardless, his movements slow, his face and hands swollen, his height 4 feet 6 inches. Under thyroid extract he grew an inch and three-quarters in 14 months.

2. A young woman, also under Dr. Hertoghe.¹ Growth stopped without apparent cause at the age of 7. At the age of 20 her face and hands were swollen; she was dull and apathetic; always felt cold; could read and write well; and was just under 4 feet high. In about a year and a half she grew 4½ inches, lost her puffiness, and became bright and cheerful. The photographs are very similar to those of Case 1.

3. A girl, under the late Dr. C. Hilton Fagge. She made good progress at school till a severe attack of measles, with erysipelas, at the age of 8, soon after which growth ceased; her features and hair underwent profound changes; pseudo-

lipomata were noticed at 12; and at 16½ Dr. Fagge diagnosed cretinism.²

4. A girl, under Dr. Dawson Williams. She learnt to talk and walk, and cut her teeth at about the usual age, and seemed in all respects normal until scarlatina with dropsy at the age of 5, after which growth nearly ceased, and a great change came over her mental state. At 18½ she seemed like a child of 5, played with dolls, showed no signs of puberty, was slow in all movements and speech, had a cretinous aspect, stood 3 ft. 8 in. high, and weighed 3 st. 6 lbs. Under thyroid extract she grew 4 inches in about a year, and became much brisker and brighter, but progress was retarded by pronounced scoliosis.

Case 1.—Aged 27.

After 3 months.

5. I saw a very typical case in the London German Hospital in February, 1886—H. E., aged 17½, who had carried off several prizes at school, and had subsequently been engaged at the *Graphic* office at 10s. per week. At 15½ he gradually lost his sight from (apparently primary) optic atrophy, and simultaneously myxœdema developed, so that when I saw him he was very stunted and broad, much swollen in the abdomen, hands, lower limbs, and face; had a staggering gait, very rudimentary genitals, very badly enamelled teeth, and was a complete imbecile. Dr. W. M. Ord diagnosed the case. A younger brother was simultaneously attending at Moorfields Hospital with kerato-iritis and choroiditis; and it was in the search for syphilis in the family that I had hunted out the myxœdematous youth.

Case 3.—Aged 16½ years.

Case 4.—Aged over 19 years.

6 and 7. Brothers, under Dr. Hertoghe.¹ At 21 and 7 months of age respectively they had suffered simultaneously from a nearly fatal throat affection (diphtheria?), after which growth was slow. They learnt to walk at 7, and were sent to school at 12. At 19 and 18 respectively they stood 3 ft. 8½ in. and 3 ft. 7 in., and under thyroid extract they both grew over 7 in. within two years, losing their cretinous aspect, and acquiring much more intelligent features.

8. A woman, aged 26, under Dr. S. Holgate Owen. Nothing abnormal was noticed till aged 6, when scoliosis was found. She began to menstruate at 23. At 26 she had the characteristic features of cretinism; she stood 3 ft. 4½ in. high, and weighed 3 st. 3 lbs.³

9. A girl, who went to school till 8½ years old, reading well, and learning arithmetic. At 13 myxœdema was diagnosed by Drs. W. M. Ord and Barlow. Her intelligence was then equal to a child of 4. She had lost her memory, her power of speaking and writing, and the use of most of her voluntary muscles.⁴

10. A woman, aged 20, who had apparently suffered from myxœdema for 5 years, and died suddenly of pneumonia.⁵

Aged 15.

Aged 18.

Cases 6 and 7, brothers. After 11 months.

REFERENCES.

¹ *De l'Influence des Produits Thyroïdiens sur la Croissance.* ² *Médecino-Chirurgicale Transactions*, vol. liv, p. 159, and plate. ³ *Lancet*, 1893, December 16th, p. 1516. ⁴ *Clinical Society's Report on Myxœdema*, case 14. ⁵ *Report on Myxœdema*, Case 107.

PROGRESS REPORT OF A MYXŒDEMATOUS SPORADIC CRETIN.

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THE photograph (Fig. 1), which is reproduced to accompany this paper was taken in January, 1896, will show for itself that since 1892 very considerable improvement has occurred in the boy of whom a former series of photographs were published in the *BRITISH MEDICAL JOURNAL* for 1893, vol. i, p. 59. [We reproduce two photographs (Figs. 2 and 3) of the patient showing his condition at the age of six years before any treatment was undertaken.]

The series of photographs then published showed the myxœdematous sporadic cretin first getting steadily more myxœdematous, and then, after thyroid grafting, steadily improving. The improvement continued for some months after the last photograph published, and then became stationary. It seemed probable that sufficient of the gland which had been grafted into the peritoneal cavity had not survived for the boy's needs, and that thyroid feeding would prove the truth or fallacy of this surmise. He was put therefore, on thyroid tabloids (Burroughs, Wellcome), and began to improve further. It has, however, never been possible to give him many tabloids, as an excessive dose at once induces marked irritability of temper and diarrhoea. He has