By adding a solution of picric acid to an equal volume of urine, and subsequently boiling with half the proportion of liquor potassæ, we are enabled in the course of about two minutes to test for albumen and sugar in the same specimen of urine.

I have proved by innumerable observations that not a trace of albumen is to be found in normal urine, and that albuminuria, like glycosuria, is a pathological condition.

REMARKS

ON

SOME OBSCURE CASES OF ENLARGEMENT

OF THE

SOLITARY AND AGMINATED FOLLICLES

OF THE INTESTINE.¹

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[WITH COLOURED ILLUSTRATION.]

DURING the summer months of 1891 there were admitted to Sir Patrick Dun's Hospital, Dublin, four cases of a very acute nature, which exhibited peculiar features as to symptoms and pathological appearances and yet presented a striking similarity among themselves in their clinical history, course, and rapid termination, and on *post-mortem* examination disclosed conditions apparently differing from each other only in degree. We shall, first, briefly give the clinical history and describe the pathological appearances presented by each case, and then proceed to discuss them.

CASE I.—T. R., aged 12 months, was brought to hospital about 5.30 P.M. on May 29th, 1891. On examination it was found that life was extinct. The child appeared to have been well nourished and tolerably carefully minded. The history obtained from the mother was as follows:—He had been in good health with the exception of an attack of convulsions eight days previously. This attack lasted only three minutes, and consisted chiefly in "working his hands." The movements ceased on the mother clapping the child with cold water. From that date he appeared to be perfectly well till the sudden onset of the fatal illness, which attacked him about one hour before his admission to hospital. Having partaken heartily of his dinner of bread and milk, he was sitting on the bed playing with his sister, when she suddenly noticed that he was looking queer. His mother took him up in her arms and shook him, after which he vomited and then became stiff. His respiration was noisy, so, on the recommendation of some neighbours who had meanwhile come in, the mother brought him to hospital, where, on admission, it was found that the child was dead.

Post-mortem Examination.—Pathological appearances were confined to abdomen. There was no peritonitis; the liver and kidneys presented no abnormal features; the spleen appeared somewhat enlarged, was firm, and on section the Malpighian corpuscles were very distinct, round, pale in colour, and varying in size from a mere dot to the head of a small pin. The mesenteric glands were greatly enlarged, tolerably firm, and rather pale. There was general enlargement of the adenoid tissue throughout the large and small intestines. Peyer's patches were raised $\frac{1}{8}$ inch above the surface, and in some of them the individual follicles stood out very distinctly. A few of the patches looked a little irregular on surface, but otherwise there was no indication of any ulceration.

CASE II.—P. E., aged 4½ years, admitted about 8 P.M. on June 4th, 1891, in a somewhat stupid condition. His mother stated that on the previous night the child was put to bed apparently quite healthy. About 3 A.M. he awoke with a shout, but, after being taken into his mother's bed, slept till 9 A.M., and then, on awakening, vomited. He had an attack of convulsions during the day but, in the absence of his father, his mother did not think it advisable to bring him to hospital. On admission the child was in a listless, semi-stupid condition, but sufficiently conscious to put out his tongue when told to do so. His temperature was 101° F., pulse 160, respirations 28. He slept very fairly during the night, took a good deal of milk, and conversed occasionally with the other patients in the ward. At 9.45 A.M., the following day, a fit came on beginning with convulsive movements of the right arm; later the right leg and muscles of the neck and back became involved, causing considerable opisthotonos. Twitching movements were observed only in the right arm, but the right leg became quite rigid, and soon the left arm and leg were also engaged. The eyes most of the time remained in a state of conjugate deviation to the right, but sometimes were conjugated to the left, and occasionally squinted. The mouth was drawn slightly to the right. The patient became paler, none of the reflexes could be excited, and he gradually became more and more comatose, till respiration ceased at 11.20 A.M.

Post-mortem Examination.—The body was that of a well-nourished male child. There was no indication of any external injury. A very detailed examination was made of the brain and membranes, but not the slightest lesion capable of recognition by the unaided eye could be detected. The

thoracic viscera presented no abnormal features, with the exception of a few collapsed pulmonary lobules. In the abdomen the pathological appearances were confined to the spleen, mesenteric glands, and intestinal tract. The spleen was firm, if anything enlarged, and on section showed the Malpighian corpuscles scattered like points through the pulp. The mesenteric glands varied in size from a pea to a small bean; were pale in colour and firm in consistence. In the duodenum the solitary follicles were numerous and considerably swollen. On the valvula conniventes they looked like rows of beads arranged along their crests. In the jejunum also the solitary follicles were enlarged, and on passing into the ileum it was seen that Peyer's patches were abnormally manifest, being raised above the surface, and presenting a peculiar corrugated appearance, but no ulceration was present. The solitary follicles in this part of the intestine were likewise numerous and distinct.

CASE III.—M. A. K., aged 4½ years, was admitted to hospital about 7.45 P.M. on June 21st, 1891, in an unconscious state. The mother stated that the child appeared perfectly well till the forenoon of the day of admission. In the morning she attended mass and catechism; but as she said she was feeling poorly during the latter, her sister was told to take her home. About 1 P.M. she complained of pain in the abdomen; she was put to bed and shortly afterwards became unconscious. It was, however, possible to arouse her sufficiently to give her some castor oil, which she vomited almost immediately. On admission to hospital, seven hours after the onset of illness, some embarrassment of respiration was noticed. In about ten minutes, twitching of the left side of the mouth occurred, followed by rigidity alternating with jerking movements of the left arm. Later the right side also became involved. There were conjugate deviation of the eyes, slight internal strabismus, and numerous irregular movements of the globes also present. Opisthotonos was occasionally manifest. She vomited some dark-coloured fluid. Respirations were laboured, and on auscultation coarse rales were audible over the chest. During the few hours she lived after her admission there was no marked diminution in the severity of the convulsions, and the temperature, which at 8 P.M. was 103°, rose at 10 P.M. to 105°, and at the time of death, 11.20 P.M., reached 108°.

Post-mortem Examination.—The body was that of a well-nourished female child, aged about 5 years. Rigor mortis absent except in lower extremities. The head presented no sign of injury. Careful examination of the brain and its membranes failed to discover any morbid lesion. Both lungs were oedematous; the glands on the posterior aspect of the root of each lung were slightly enlarged. The right auricle of the heart was greatly distended with blood. The liver and kidneys were apparently normal. The spleen was firm and of normal size. The mesenteric glands were greatly enlarged, pale, and firm. The duodenum and jejunum presented numerous swollen solitary follicles. In the ileum Peyer's patches became increasingly evident as one approached the ileo-caecal valve, where they were distinctly raised above the surface of the surrounding parts. They were pale in colour, and presented no indication of ulceration. The vessels on the external wall of the intestine, corresponding to the site of Peyer's patches, were injected. In the colon numerous white roundish spots were to be seen shining through the wall. On opening the gut, these were found to be the enlarged solitary follicles, each with an evident depression in its centre.

CASE IV.—M. H., aged 3 years, admitted to hospital at 1 P.M. on August 6th, 1891, in a convulsive attack. As far as could be ascertained from the mother, the child was in good health till the previous day, when she complained of pain in the abdomen. At 11.30 A.M. on the day of admission the child was seized with a convulsion, involving, as stated by the mother, chiefly the right side. At the time of admission the movements were also chiefly confined to the right side, but later on the left became involved, and this was accompanied by some arching of the back and contraction of the left pupil, the right remaining dilated. Towards evening the child became quieter, and was able to take some liquid nourishment. The pulse was 192, and the temperature 103° F. She passed a tolerably good night, but at 6.30 the following morning the movements again set in, and she gradually sank, and at 12.30 P.M. respiration ceased.

Post-mortem Examination.—The body was that of a well-nurtured child. The pathological features were confined to the abdomen, and involved only the following organs: The spleen, normal in size, was apparently somewhat harder than usual. The mesenteric glands were enlarged to the size of small beans; as a rule, firm and pale, though some were of a brownish-red colour. In the duodenum and ileum the solitary follicles were enlarged; in the latter also the agminated glands were abnormally prominent. The whole of the patch was enlarged, but in addition to this there were ridges of a reddish-brown colour and of gelatinous consistence passing across the surface of the gland. This appearance was lost after the specimen had been in spirit for twenty-four hours, but it is the cause of the shaggy character which the patches now have.

From the foregoing clinical histories it will be noticed that all the cases occurred in children under 5 years of age. Each child was apparently in perfect health till the sudden onset of this fatal affection. In no case, except the first, who was said to have had an attack of convulsions one week previously, from which he apparently quite recovered, and seemed to enjoy in the interval excellent health, could any history of any illness, shortly before the final one set in, be obtained. The onset was invariably tolerably acute, accompanied in Cases I and II by vomiting, and in Cases III and IV by pain referred to the abdomen. Later on convulsive movements manifested themselves; these, as far as we had an opportunity of observing them, were generally unilateral in origin, but soon spread to the other side and then became general. At times the movements were violent, and attended by complete unconsciousness, the patient presenting the appearance of a child suffering from very acute meningeal inflammation. Accompanying these phenomena we had an elevated temperature, quickened respirations, and a very frequent pulse. The dura-

¹Read in the Section of Pathology at the Annual Meeting of the British Medical Association, held at Bournemouth, August, 1891.

FIG. I.

FIG. II.

FIG. III.

FIG. IV.

tion varied from one hour in Case 1—in which we have to rely altogether on the mother's statement—to forty-eight hours in the fourth case, death appearing, as a rule, to result from exhaustion consequent on the violence of the movements.

At the *post-mortem* examinations the complete absence of any morbid lesions in the brain or its membranes was striking, the pathological features being practically confined to the intestinal tract, the mesenteric glands, and the spleen. In each case the swelling of the agminated and solitary follicles in the small intestine was manifest. The enlargement of Peyer's patches is probably best seen in Figs. 1 and 3; while in Fig. 2 the solitary follicles are particularly well marked. A specimen of the tumefaction of the solitary follicles of the large intestine is probably best afforded by Fig. 3, in which the depression corresponding to the mouth of the individual follicles is quite distinct. The mesenteric glands varied in size from peas to hazel nuts, and were, as a rule, tolerably firm. In no case was the spleen enlarged to any considerable degree; it appeared to be generally about normal in size, and firm. In a couple of the cases the Malpighian corpuscles seemed to be unusually numerous and distinct. A microscopical examination of the swollen tissues revealed little more than an hypertrophy of their constituent elements; there was no indication of any caseation or necrosis. Sections from the Cases I and III were frequently stained with various aniline dyes and after different methods for bacteria, but always with negative results.

These cases, while all residing in the vicinity of Sir P. Dun's Hospital, lived at some distance from each other. The medical officers in the neighbourhood have had no similar cases, nor have we been able to obtain from the other city hospitals, of which we have inquired, any evidence of an epidemic manifesting itself by phenomena similar to those described. An investigation into the health of the district, with special reference to the excessive prevalence of acute infective diseases, of which it might be thought that these were a virulent type, was likewise attended with negative results. At the time these cases were admitted our own fever wards were unusually empty, and there was no indication whatever of the severe epidemics of typhoid fever and influenza which broke out some three or four months later.

Enlargement of the intestinal adenoid tissue occurs under a great variety of conditions. It accompanies, invariably to a greater or less degree, any general acute infective process, for example, the infective fevers, diphtheria, cholera, dysentery, pyæmia, and septicæmia. Undoubtedly in no affection is the enlargement of the adenoid tissue so marked as in typhoid fever, and hence great swelling, with possibly ulceration of Peyer's patches, with swollen congested mesenteric glands, and a spleen considerably increased in size and friable in consistence, are practically pathognomonic of enteric fever. It may indeed be suggested that these cases are badly marked specimens of that disease. In dealing with such a suggestion, we must bear in mind the great infrequency of typhoid fever in children under five years (less than 1 per cent. according to Murchison), the still greater rarity of a death at that early age, and hence the great improbability that four fatal cases should occur within two months, and that at a time when Dublin was comparatively free from enteric fever. But, even neglecting for a moment these inherent improbabilities, we think that the clinical history, the pathological appearances, and the negative results of the bacteriological examinations debar us from looking upon any one of them as a case of typhoid fever.

In the *Transactions* of the Dublin Pathological Society for 1872, Dr. Foot describes a specimen resembling our cases in some points. "The entire mucous tract," Dr. Foot states, "of the small intestine from the duodenal orifice of the common duct downwards was strewn with hard greyish beads, the size of a pin's head, as if grains of sago had been sprinkled over the parts, or mignonette seeds." It differs, however, from these cases in its clinical history (the child was six days in hospital) and in the absence of any involvement of the agminated glands. We have ourselves within the last few months met a case in the *post-mortem* room in which the pathological condition of the intestines closely resembled these specimens. The patient, a boy aged 5 years, died after an illness of a few days from a very extensive diphtherial in-

flammation of the pharynx and larynx, which also extended into the trachea. In addition to the pathological changes in these organs and in his lungs, we found the solitary and agminated follicles in the intestine presenting features very similar to the least marked of the cases with which we are now concerned. In the absence of definite signs and symptoms of the ordinary acute processes, it occurred to us that possibly we were dealing with examples of so-called intestinal mycosis. This hypothesis would serve to explain the rapid death, and possibly also the pathological appearances; but a particular inquiry directed to the nature of the food which the patients had used failed to elicit any information which would support this theory; and as none of the adult members of these families suffered from any symptoms of gastro-intestinal irritation, we think we are bound to reject this supposition as untenable.

We have made a cursory examination of the literature of this subject, and so far have found no description which corresponds so closely with our specimens as that contained in Rokitsky's *Pathology*, under the title of "The Non-typhous Intumescence of the Agminated and Solitary Follicles of the Intestine." He describes this condition as present (1) in affections of the intestinal mucous membrane, as in diarrhoea, particularly when occurring in children; and (2) as a "reflex of constitutional disease in almost all the exanthemata, particularly in scarlet fever, variola, and erysipelas; in acute rheumatism and gout; in croup, in septic and gangrenous diseases, and, lastly, in acute convulsions, trismus, and tetanus." Whether these cases would come under his category of "acute convulsions"—a sufficiently vague term—and, if so, what is the disease of which they are only an outward and visible sign, we are unable to say.

While acknowledging our inability to state what the nature of the affection is—whether, in fact, we are dealing with one or more diseases—we trust that the publicity which these cases now have may be the means of throwing some light on them, of preventing the too hasty diagnosis of meningitis in similar cases, and, finally, by pointing out the great difficulty of clinical diagnosis, of leading to a greater desire and determination to bring our bedside theories to the bar of a *post-mortem* examination.

In conclusion, we have to express our cordial thanks to Professor Finny, President of the Royal College of Physicians, Ireland, for permission to use Cases I and IV, which were admitted during his period of duty at the hospital. Our thanks are likewise due to Mr. Wade, one of the students of this hospital, to whom we are greatly indebted for the trouble and time he expended on the photographs, and to Messrs. Kennan and Kiddle, resident pupils, for the assistance they gave us in the preparation of the specimens.

[Note.—Dr. Parsons kindly undertook the entire trouble of preparing this paper and making the histological examination.—W. G. S.]

STRANGULATED HERNIA OF THE LEFT OVARY IN THE FEMORAL REGION.

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THE rarity of cases of strangulation of a herniated ovary, as also the comparative infrequency of the hernia taking place through the crural canal, renders, I venture to think, the following case worthy of record:—

The patient, an unmarried lady aged 75, was under the care of my friend, Dr. Beath Henderson. In the summer of 1888 she was, for the first time, troubled with a little lump which she felt in her left groin. It had arisen from no known cause, and was accompanied with no other symptom than that of a frequency of desire to micturate, and an apparent inability, as she stated, to empty her bladder. On lying down for a short time she found the tumour disappeared, and with it the urinary symptoms. Since its first appearance the "lump" had often come down, but she found, by pressure and rest on her back, she was able to return it. When down the trouble in micturition always returned, but disappeared on reduction. At these times, when the tumour could be felt, it was about the size of a bean.

On March 14th, 1891, the lump came down and she found she was unable to reduce it. Dr. Henderson then saw her, and, failing to reduce it, ordered the application of hot fomentations and rest in bed. On March 19th—five days after the descent—Dr. Henderson asked me to see her. He stated his belief, from what he had seen of the case before, that it was