that these two cases are instructive as tending to prove that, even in advanced conditions of structural disease of the organ, that symptom may be entirely wanting. The absence of colour from the motions has also been insisted on by some writers as indicative, in the absence of readily recognisable hepatic disease, of some interference with the pancreatic secretion. Claude Bernard taught that the coloration of the faeces was indirectly due to the action of the pancreatic juice, and Dr. Walker, of Peterborough, likewise came to the conclusion that a deficiency of pancreatic fluid would, as readily as a deficiency of bile, cause clay-coloured evacuations. If this were entirely true it is difficult to understand why in both these cases—and particularly in Case II, where the whole substance of the gland had undergone extensive change—the motions were not always colourless. Further, it would seem doubtful whether reliance can be placed on the theory of the formation by the pancreas of a glycolytic ferment, because sugar was invariably absent from the urine during the whole course of both illnesses. The absence of notable digestive disturbance and of persistent jaundice is specially striking in such pronounced types of pancreatic disease. The probable explanation is that, the fats being chiefly administered in the form of milk, that is, practically as an emulsion, were capable of direct absorption; and that the common bile duct escaped such pressure as would cause its complete occlusion.

In Case I the original history pointed to lead poisoning as the likely etiological factor, but *post-mortem* evidence suggests the suspicion that the attacks of colic, from the beginning, may have been due to pressure or inflammatory disturbance of the solar plexus. At any rate, there can be little doubt that in the later stages this was the explanation of the terrible paroxysms of acute pain which the unfortunate man endured. The enlargement of the liver might be explained by temporary vascular changes caused by the progress of the morbid growth. Another instructive symptom in this case was the distressing and fitful cough, which was probably due to irritation of the vagus nerve where it terminates in the solar plexus, while the drenching perspirations might also be the result of sympathetic nerve disturbance conveyed through the splanchnics. Intermittent pressure on the common bile duct would account for the jaundice, the emaciation and exhaustion might be looked upon as direct results of the dyscrasia, and the repeated syncopal attacks were either likewise due to this cause, or to interference with the cardiac nerve supply through the vagus or sympathetic nerves.

In Case II the early seizures were so apparently characteristic of the passage of gall stones that little doubt was entertained as to their nature; but again, *post-mortem* evidence makes one hesitate to ascribe them to this cause alone, even though a few calculi were found in the gall bladder; for might not the paroxysms be equally explained by the same cause which produced them in Case I? Gall stones were never actually found in the evacuations, and though their presence in the bladder made it likely that the patient suffered during life from the passage of one or more into the duodenum, it is equally possible that to some extent the painful seizures were due to changes going on in the pancreas, and producing pressure effects on the neighbouring nerve plexus; and in this connection it is to be observed that the later attacks of colic were not followed by jaundice. The abdominal distension, copious sweatings, flushings, and unusual rapidity of cardiac action would all be produced by disturbance of nerve equilibrium emanating from the site of pathological lesion. The hard lump felt in the epigastric region towards the end of the illness proved to be the lower edge of the pancreas, through which were transmitted the pulsations of the abdominal aorta, the pressure of the hard and enlarged gland against the large vessel being the cause of the loud systolic murmur; lump and murmur together, however, were strongly suspicious of aneurysm. The rapid emaciation and pronounced prostration must again be referred to the direct effect of the malignant growth on the vitality of the blood, because it was specially remarkable in this case that, throughout the whole course of the illness, nourishment in ample quantity was not only swallowed and retained, but perfectly assimilated.

The leading characteristic of both cases was the rapidity of the emaciation when it had once commenced, together with the degree and early manifestation of prostration, greater than that met with in any other form of malignant disease, and it suggests that the pancreas ought to be suspected when in a patient over 40—particularly in a male patient in whom the disease is said to occur most commonly— indefinite epigastric discomfort is accompanied by rapid emaciation and overwhelming weakness. If to these symptoms are added nerve disturbances which can be referred to the vagus or sympathetic, the probability of the pancreas being the *fons et origo mali* is strengthened; and if further corroborative testimony is afforded by a hard mass in the epigastrium, by glycosuria, by persistent jaundice without liver symptoms, by stools which are greasy in appearance, or clay-coloured without an obstructed bile duct to be found in explanation, then the diagnosis may be looked upon as practically certain, while the prognosis unfortunately is absolutely hopeless.

PULSUS PARADOXUS IN ACUTE LARYNGITIS.

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IN the BRITISH MEDICAL JOURNAL for June, 1893, I recorded some observations on the occurrence of *pulsus paradoxus* in cases of acute laryngitis. At the time of writing the paper, although I had seen several cases in children in which this physical sign was present, I had not been able to secure a pulse tracing showing it.

In February, 1894, however, a case of acute laryngitis came to the Royal Infirmary, Manchester, with the irregular pulse well marked, and from it I managed to take some good tracings. The following are a few brief notes of the case:

L. H., aged 6, was brought, on February 24th, 1894, to the accident room, suffering from severe dyspnoea, which the mother said had come on rather suddenly about thirty-six hours previously. The boy looked very ill, tossing about from time to time as he lay on his back on his mother's knee, throwing up his arms and gasping for breath. His face was dusky and cyanosed; the breathing was very laboured, especially during inspiration, and the extrinsic respiratory muscles were in action. The lower ribs were markedly drawn in with each inspiration. The respirations were about 45 per minute. The cardiac impulse could be seen through the chest wall and the heart was felt to be beating in a very heavy and laboured way. The pulse at the wrist was about 90 per minute, and was easily felt to be very irregular in the volume of the individual beats. It was almost imperceptible during inspiration. No membrane could be seen on the fauces. As the child was very ill, and from the mother's account getting rapidly worse, it was decided to perform tracheotomy.

The case was sent up to the theatre at once, and a small quantity of chloroform administered. Just before the trachea was opened I took two pulse tracings, one of which (Fig. 1) is reproduced here. In this the irregularity of the pulse wave is plainly seen, the smaller beats occurring synchronously with inspiration, and the larger ones with expiration.

Fig. 1.

The trachea was opened within twenty minutes of the patient's arrival at the hospital, and immediate relief to the urgent symptoms was obtained. The dyspnoea and cyanosis passed off rapidly, and the pulse became more regular, less laboured, and quicker. Figs. 2 and 3 are copies of tracings taken from the pulse one minute and two minutes respectively after the trachea was opened. In the former it will be seen that the character of the pulse is much altered from that in Fig. 1, being much more regular in the height of the upstroke. There still, however, occur in it some feeble beats, indicating that the heart had not recovered itself completely,

but these are very much less marked in Fig. 3. This latter pulse tracing is almost normal.

Figs. 2 and 3.

The patient died about forty-eight hours after operation, and *post mortem* very extensive membranous inflammation was found, extending from the larynx to the bronchi. The fauces were unaffected.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

HÆMORRHAGE INTO PONS SIMULATING OPIUM POISONING.

THE patient, who was supposed to be asleep, was found to be unconscious, and I was then sent for. On examination I found the pupils were equal and minutely contracted and insensible to light; the breathing was slow and laboured; the pulse was 68, full and laboured. It was impossible to rouse the patient. The pupils dilated one hour before death. I was told that she had taken some pills for the relief of pain, as she had been suffering from gall stones.

On making a *post-mortem* examination I found a large clot in the pons Varolii. The case is interesting as showing the impossibility of diagnosing some cases of hæmorrhage into the pons Varolii from opium poisoning. I found, on subsequent inquiry, that the pills she had taken did not contain any opium.

Hendon.

F. W. EDRIDGE-GREEN, M.D., F.R.C.S.

COMA AND CONVULSIONS ASSOCIATED WITH INFLUENZA.

THE following case is perhaps worth recording beside Dr. McCaw's interesting one reported in the *BRITISH MEDICAL JOURNAL* of April 6th, p. 752.

I was called to A. H., aged 2 years. He was, till the occurrence of the present illness, a particularly robust child of healthy young parents. The mother told me he had been suffering for a few days from feverish cold, cough, etc. As a matter of fact, the majority of the children in the locality were suffering from the recent mild epidemic of influenza, and so no doubt was this one. The child when first seen was quite unconscious, with a good deal of muscular rigidity. The face was rather flushed; the temperature in the groin was 101°. Two hours previously, at 6 P.M., the child was noticed to be "scalding hot," and while under observation was seized with violent convulsions, beginning probably on one side but soon becoming general. During the two hours before I saw him there had been no return of consciousness; spasmodic muscular contractions had been incessant, and violent convulsions occurred several times; some urine had been passed. I put him in a tepid bath for a few minutes without apparent effect, and then went for the necessary remedies. On my return I was told that almost immediately after coming out of the bath convulsions recurred very violently; this time both rectum and bladder were emptied. It was by this time just 2½ hours since the attack commenced; all the muscles of trunk and limbs were perfectly flaccid, but some of the facial muscles were twitching slightly. The eyes were staring widely open, the pupils much dilated, and the corneæ perfectly insensitve even to a rough touch. The face was a dull white colour, and the surface of the body felt cold; the pulse could not be accurately counted because

of marked intermission; it was between 150 and 200; in fact, the child was to all appearances moribund. I gave 10 grains of bromide of potassium by the rectum, and then put the patient under chloroform. In about a minute, or perhaps two, from the commencement of inhalation the eyelids suddenly dropped over the eyes; the breathing, which had been very shallow, became deep and slightly stertorous, the face became at the same instant flushed; deep coma was evidently replaced by sleep. The child slept for several hours before waking, disturbed by the cough; he had a fairly good night, and next morning was quite well except for his cough and a slightly dazed mental condition. In a few days he was in his usual health.

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SYDNEY W. MACILWAINE.

THE EFFECT OF UNILATERAL CASTRATION ON THE PROSTATE.

DR. J. WILLIAM WHITE, in the *BRITISH MEDICAL JOURNAL* of March 2nd, requests surgeons to report cases of unilateral castration in which an examination of the prostate is made. On March 7th I removed from a young man of 17 an imperfectly-developed right testicle, which was lying just over the pubes and was surrounded by a "congenital hydrocele." Probably it had been retained within the inguinal canal in childhood, and had thus failed to develop. It was in constant danger of pressure against the pubes, the hydrocele only filling when he moved about and disappearing again during recumbency.

I removed the testicle and hydrocele sac together. Seven weeks after the operation, and when he came to show himself at the hospital on April 25th, I examined the prostate and found most decided atrophy of the corresponding side. There was, indeed, nothing on the right side at all corresponding to the lobe on the left, which is very well developed. It is difficult to say whether this is due to the imperfect development or removal of the testicle. When we remember the rapidity with which atrophy has occurred in enlarged prostate after bilateral castration, it is quite possible that the small size of the right side in this case is due to atrophy following the operation, and I am inclined to think that this was the case, as, although the right testicle was much smaller than the left, yet it contained a fair amount of gland tissue which appeared normal in structure.

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ACETONÆMIA COMPLICATING ENTERIC FEVER WITH CONCURRENT PERITONEAL EFFUSION IN A CHILD.

J. R., aged 11 years, came under my care in November, 1889, suffering from constipation and swelling of the abdomen. Up to three weeks before he was running about. He gradually failed, complaining of headache and vomiting, and was then put to bed, and dieted on beef-tea, milk, and grapes. He was very pale and drowsy, with a puckered forehead and dark rings round his eyes; the pupils were normal. The knees were drawn up as he lay on his left side. The abdomen was very prominent, especially below the umbilicus, where a distinct comma-shaped protrusion was seen moving downwards from right to left obliquely across the abdomen. This was dull on percussion, and had a decidedly boggy feeling. The small intestines were dilated, the cæcum and ascending colon packed with fæces, and there was some ascites. The tongue was dry, and coated with a thick brown crust anteriorly, elsewhere the surface had a white fur. On the skin there were numerous rose-coloured spots, which did not disappear even after a lapse of six days. The temperature was 103° F., the respirations 48; expiration was prolonged, especially in the right lung, with small crepitant râles. There was herpes on the right upper lip. The heart sounds were good; the pulse 108, serous in character. He slept almost continuously for forty-eight hours. The bowels acted unconsciously three times during the first twenty-four hours; the motions smelt acid, with black hard lumps about the size of the terminal phalanx of the little finger floating in an orange-coloured liquid mixed with greenish masses of gelatinous consistency. The urine was loaded with indol, acid, dark amber, specific gravity 1022, no albumen. On the