healthy, and is uniting. The further progress of the case was steady and good. She gradually regained her strength, and she was soon able to walk about the wards and in the gardens. When she left, on Feb. 2nd, the wound on the scalp was firmly united, and she was altogether in perfect health.

CASE 3. *Depressed Fracture of the Skull; Concussion of the Brain; Contusion and Laceration of the Meninges; Acute Meningitis; Application of the Trephine; Recovery.*—Rookmee Etaba, a Hindoo girl aged twelve, was admitted in the clinical surgical wards of the Jamsetjee Jejeebhoy Hospital on March 31st, 1882, suffering from fracture of the skull and other contused wounds, the result of a fall. Of somewhat weak intellect, and subject to epileptic fits, she was standing on the summit of a steep hillock (Belvidere Hill, Mazagon) when she fell to the ground, seized with an epileptic fit. Under the influence of the fit she rolled along the steep and rough incline of the hillock, some sixty feet. She was picked up insensible and at once carried to the hospital. On admission her condition was as follows:—There is a lacerated wound situated above the left eyebrow, and which extends directly upwards and backwards for about one inch and a half; the bone is exposed, fractured, and depressed at the centre of the fracture. Some deep lacerated and contused wounds are found in the following positions. One over the left malar bone, one some three inches in length over the left side of the thorax, another over the left hip-joint, and many smaller abrasions and contusions are seen on different parts of the body. Both ankles are much swollen and tense. She is still unconscious; pulse 80, small; respiration shallow, 80. She now and then starts and moans, and frequently carries her hand to the wound on her head.—April 1st: She is drowsy, but can be roused somewhat. She is unable to answer questions put to her. Bladder distended; ten ounces of urine withdrawn by catheter; specific gravity 1016. Towards noon the temperature, which had been normal until then, began to rise and acute delirium set in. Pulse 114; respiration 32.

April 2nd.—She passed a very bad night; great restlessness and delirium. This morning temperature 104°; pulse 114; respiration 32. All day she remained in the same condition, the pulse losing strength and becoming more rapid. The prognosis being very unfavourable, an attempt to relieve her condition by applying the trephine was decided upon, and at 6 P.M. she was placed under the influence of chloroform. A crucial incision having been made at the seat of the fracture and the flaps dissected back, a small trephine was applied over the centre of the fracture. This having been removed, a few loose small fragments were found lying on the dura mater. One sharp-pointed fragment had lacerated the membranes and wounded the brain. From around and beneath the fracture some clots of blood were removed. The dura mater at the seat of the injury was much injected and of a violet colour. A slight oozing followed the removal of the penetrating fragment. The flaps were brought together by wire sutures, a small drainage-tube being introduced. The wound was dressed antiseptically.—3rd: Still delirious, but less violent than the day before; urine withdrawn by catheter. Temperature 102°; pulse 104. She became more excited towards evening, and the temperature rose slightly.—4th: Passed a pretty fair night, neither noisy nor restless; she is still unconscious; passes urine in bed. The right ankle is much swollen and painful. Temperature 103°; pulse 100; respiration 24. Towards evening the temperature fell to 100°. The following days she remained in about the same condition, at times quiet, at times noisy and violent. She took nourishment badly. An abscess formed near the right ankle-joint, and after it had been opened (April 9th) the temperature fell to normal.—17th: Passed a fair night; answers questions when pressed to do so; generally lies quiet or moans; no longer passes water in bed, but calls for the nurse; takes nourishment fairly well; the wound on the head discharges slightly. Temperature 99°. For a while she again became somewhat violent and restless at night; several abscesses formed at the seat of the contusions, and much of the uneasiness she experienced about that time was doubtless due to these inflammatory abscesses. In the beginning of May the improvement in her condition was more marked; she understood what was said to her, but was unwilling to answer, and when she did so it was in a cross, angry tone, as if annoyed at being disturbed; she now slept well at night, her bowels were regular, she took her food better, her temperature was generally

normal; the pulse averaged about 80, and was weak and compressible; the wound on the forehead was nearly healed, a few drops of sero-purulent discharge alone soiling the dressing; all the other abscesses were completely healed.

May 14th.—She is in a fair way towards recovery; is able to sit up in bed, takes her food well, is gaining a little strength; she is sulky and cross generally, and is still unwilling to speak when questioned. According to her parents she is intellectually very much the same as she was previous to the accident. Discharged at her parents' request.

The first case is one of a depressed fracture of the frontal bone, attended by slight concussion of the brain. On the seventh day after the injury the individual, who until then was doing well, was suddenly seized with progressive facial paralysis, dyspnoea, &c. These symptoms (taking into consideration the date of their appearance) indicated localised inflammation of the brain due to the presence of depressed and penetrating fragments of bone acting as a foreign body. That this was the case was amply proved by the result of the operation. The relapse which followed a few days afterwards was due to the contused brain undergoing suppuration, and owing to a free exit having been made by the trephine, the abscess was evacuated externally, and rapid recovery ensued.

In the second case we have to deal with a well-marked instance of functional disturbance of the brain. There was compression of the brain on its convex surface (a piece of bone being firmly wedged in), but unaccompanied by symptoms of compression. The paralysis and contraction which afterwards developed were due to disturbed cerebral circulation, and to localised congestion, rather than to inflammation. This is implied by the rapid improvement that followed the operation.

In the third case there was severe concussion of the brain, with laceration and contusion of the meninges. The very rapid and unfavourable progress of the case made the prognosis a most serious one. Nevertheless, after the penetrating fragments had been removed the further progress of the cerebral inflammation was considerably lessened.

Apart from their diagnostic value, I think that these cases will assist in rehabilitating the operation of trephining the skull in appropriate cases. These three individuals would, in all probability, have succumbed to cerebral inflammation had not operative surgery interfered on their behalf.

Bombay.

NOTES OF

THREE ABDOMINAL CASES OF INTEREST.

By J. A. CAMPBELL, M.D., F.R.S.E.,

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CASE 1.—M. C.—, a female aged at death fifty-four years, had been admitted into the Carlisle Asylum in the year 1862, and at that time was described as labouring under mania and being in weak bodily health. My knowledge of her included the latter fifteen of the twenty years she lived in this asylum. She laboured under many delusions, talked much to herself, enjoyed good bodily health until shortly before her death, and was industrious and useful. From the many entries in her case I find that little or no ostensible change in mental or bodily state was noticed up to January, 1879, when she had an attack of vertigo, and for some days felt out of sorts. She, however, continued in her usual bodily state during 1880. In the latter half of 1881 she became thinner, her skin became yellower than it used to be. On more than one occasion she was examined, but no active disease or indication of organic disease could be found. It was noted, however, that she had a cancerous look.

On Jan. 22nd, 1882, the patient complained of feeling ill, but owing to her incoherent expressions it was impossible to get her to say more than that she felt ill. She vomited, her tongue was moist and clean, her temperature normal; pulse 78, small. An examination of the chest showed a normal condition of the thoracic viscera, and nothing abnormal could be detected as regards the abdominal organs; as there seemed a tendency to constipation of the bowels an

enema of tepid water was administered, which produced two alvine evacuations. On the 23rd there was little change in the patient; she took food, but looked ill. On the 24th the morning temperature was 99°; pulse 96. She looked worse. Abdomen tympanitic and tender to the touch; no fluid in the abdominal cavity. Ordered half a grain of opium in a pill each hour. In the evening she complained of acute pain, referable to the region of the stomach, was sick, and retched much. A hot fomentation was applied and retained for some hours over the abdomen, but as relief from pain was not at once caused by hot application a subcutaneous injection of morphia was administered above the region of the stomach. Cessation both of pain and sickness immediately followed this treatment. Pain and sickness, however, recurred later in the day, but disappeared on a repetition of the injection. On the 25th the morning temperature was 98°; pulse 96. Tongue furred and dry, pulse small, tenderness over abdomen, but nothing abnormal could otherwise be discovered. Decubitus on the back, with a tendency to draw up the legs. On the 26th the morning temperature was 97°; pulse 74. Tongue furred; during the night the bowels had been three times moved, fæces normal in colour but unformed. Abdomen tympanitic, tense, and tender. On the 27th the morning temperature was 97°; pulse 80. Was weaker and looked worse. Abdomen less tympanitic and tense; has taken a fair amount of liquid food. On the 28th she was worse, pulse more feeble, skin cold. On the 29th she became worse and died.

Autopsy, forty-two hours after death.—The body was thin, and the skin tinged yellow. The brain was examined, but no abnormalities detectable by the naked eye were observed. Chest: The lungs were slightly adherent to the parietes by old adhesions; the bases of the lungs posteriorly were passively congested, and the structure of the lungs, on section, was normal. Heart: Muscular substance fatty; valves competent. Abdomen: The liver was light-coloured, friable, and fatty. Gall-bladder contained twelve small dark-coloured calculi (a large biliary calculus was subsequently found in the small intestine). The spleen was dark and soft, and the kidneys congested; otherwise normal. There was evidence of peritonitis of the outer coat of the intestine, more especially of the large intestine. There was no fluid in the abdominal cavity, and the peritoneum lining the abdominal parietes was in a normal state. The intestine was taken out and examined; nothing unusual, except the already mentioned biliary calculus, was noted about the small intestine; but the large intestine, down to the sigmoid flexure, was much distended, and contained flatus. There was a ring of hard cancer about an inch above the sigmoid flexure, which formed a constriction, only admitting one finger; and about three inches above this there was an ulcer, about the size of a penny, with irregular and indurated edges. There were no other abnormalities in the large intestine.

CASE 2.—J. M.—, a female, aged sixty years at death, was admitted in June, 1871, labouring under melancholia, and in very weak health; pale, thin, cachectic-looking, and to all appearances very aged for years. I always suspected internal cancer from her appearance. All forms of treatment to improve her bodily health and to increase her weight (which on admission was 106 lb., height 5 ft. 2 in., and which diminished to 88 lb. within the first ten months), proved unavailing. She resented the slightest interference, never spoke, but bit, struck, kicked, or scratched if any attempt at examination was made. She had a habit of rubbing her hands, and did so so continuously that an abscess formed connected with the first finger of the right hand, and also another abscess connected with the fourth finger of the left hand. In spite of treatment disease of the cartilage and bone set in in both fingers, and they had to be removed. Healing took place extremely slowly, in fact for a long time little or no change seemed to take place in the severed tissues. On March 1st, 1882, it was noted that she was becoming gradually thinner and weaker, and on more than one occasion, but at considerable intervals previous to this date, she had had a loose stool followed by great pallor, faintness, and coldness. She resisted all attempts at examination with extreme viciousness. On several occasions she has been examined while being forcibly held. The result of these necessarily imperfect examinations may shortly be stated—viz., that percussion over the chest was clear, that some mucous râles were heard over both lungs, that the heart sounds were feeble but distinct, and that nothing abnormal was detected by percussion or touch; as regards

abdomen, her temperature was subnormal, her bowels were moved regularly, she took a fair amount of food, but she became gradually paler, thinner, more cachectic-looking if possible, and died on March 7th, 1882.

Autopsy, forty-nine hours after death.—The body was thin, and free from marks of injury. The brain was examined, but no marked lesions were noticed, and it is, therefore, unnecessary to enter into a detailed account of the appearances. The left lung was closely adherent by old adhesions to parietes, especially at apex; its upper lobe was congested, both lungs contained some deposit of grey tubercle at apex. The pericardium contained two ounces of fluid; the heart was yellowish in colour, its muscular substance was fatty, its valves competent. Liver light coloured and friable. Spleen and kidneys normal. Stomach and intestines removed and examined; both were found in a normal state, with the following exception. At the caput cæcum there was a thickening and appearance of tumour, as if the caput cæcum were crammed full of contents of a firm nature; on removing and laying it open the whole of the inner surface of the caput cæcum was found covered over with irregular masses of hard cancer, but the cavity of the viscus was patent, the external surface presenting a smooth and normal appearance.

CASE 3.—E. H.—, aged thirty-four at death, was admitted in November, 1866. She was entered as a congenital imbecile in weak health, unable to answer questions though able to speak a few words, was dirty in habits, ill-tempered, passionate, and at times violent. By dint of careful attention she improved in habits and conduct, and her bodily health improved. In 1873 she had an attack of excitement which lasted nearly six months, and during which, in spite of careful feeding, she lost weight. From this date till March, 1882, she remained in her usual mental condition. During the period of more than fifteen years that she had been an inmate of this asylum she had been free of physical ailment.—March 25th: Patient had taken food the day previously as well as usual, and seemed in her ordinary state of health when she went to bed. During the night her bowels were moved. The motion was reported as natural in colour, size, shape, and consistence, by the night attendant. After this she was rather talkative, and appeared as if pained. As she looked ill she was kept in bed. She refused breakfast. I saw and examined her with all the care I could shortly after 9 A.M. There were no marks on the body. Temperature 97°; pulse 80, very weak. The tongue was slightly furred, with a tendency to dryness. The heart's sounds were feeble. There was comparative dullness over the left lung, both anteriorly and posteriorly, and respiration was harsh; but no crepitation, mucous râles, or other abnormal sounds heard. The abdomen was examined, and nothing abnormal was detected. There was no increase in size, and no abnormality noticed by touch or percussion; the patient exhibited no fear of being examined; no tenderness on pressure. The patient seemed to have a tendency to sickness, though she did not vomit. I was at a loss to know what was wrong, but thought it probable that she was going to have an attack of acute chest disease. I ordered a mustard poultice to be applied to the left side, and liquid nourishment to be given to the patient. At noon, while sitting up taking some beef-tea, which she was doing with avidity, she suddenly fell back in bed, and had a slight epileptiform convulsion, her eyes turning round. She became sick, vomited the beef-tea she had taken, passed urine in bed, and died in a state of collapse within forty minutes.

Autopsy, twenty-eight hours after death.—Body free of marks; rigor mortis present; face and lips pale; pupils equal, rather dilated; thumbs inverted. Head: Brain examined, no abnormality noticed. Chest: Right lung free in cavity, very slightly congested; left lung very slightly adherent at apex by an old adhesion; left lung was slightly congested, principally posteriorly; structure of both lungs normal. Heart: Muscular substance normal, valves competent. Abdomen: There was a considerable amount of blood-tinged fluid in the abdominal cavity, and on the contents of the abdominal cavity being fully exposed, a large portion of the ileum and of the large intestine were seen to be quite black; there was, in fact, a twist of a large mass of intestine. Ligatures were applied to the lower ends of the duodenum and colon and the mass removed. Eight feet (measured) of the small intestine were found to be black and strangled, and a foot of the descending colon was similarly affected. The intestine, though black, was found strong and fresh on traction, showing recent strangulation. There was no ulceration of intestine, and no abnormality of parietal

peritoneum. The liver, spleen, kidneys, uterus, and ovaries were normal; the stomach and urinary bladder empty.

Remarks—I have endeavoured to eliminate extraneous matter and to condense the account both of the cases and autopsies from the reports in my possession so as to save the reader from needless mental exertion. In an asylum containing from 400 to 450 patients, with an average death-rate of only 7 per cent. per annum, calculated on the average numbers resident, to have within two months three deaths from causes such as are narrated above is a remarkable coincidence. That abdominal cases are about the most obscure, the most uncertain, and the most difficult to deal satisfactorily with is almost an axiom. The difficulty in diagnosing and treating physical disease in the vast majority of the insane is as great as, and in many cases even greater than, in dealing with young children; no indication of the seat or nature of the malady can be communicated by the patient. In the three cases reported no aid of this sort was really available; in one, the first case, pain was complained of, but during most of the illness many vague complaints were made, and they were made only in a semi-coherent manner. In the second case active resistance to examination complicated matters; and in the third and last case real mental defect prevented the power of communicating symptoms. In the first two cases I suspected internal cancer from the general appearances, but was unable to localise it. In the first case, that of M. C.—, the yellowish tinge of the skin, the sickness, and pain in the region of the epigastrium might be, and probably were, the result of the gall-stone complication. The great prevalence of gall-stones in the insane has been noted in other asylums as well as in this. Considering the gravity of the intestinal lesion, it seems rather astonishing that signs of bowel complication should not have set in earlier, and have been of a more intense character. The unformed character of the stools was noted; but this means really nothing, for I have seen in a case of very narrow stricture of the large intestine large solid and firm faeces passed, which must have solidified and formed in the lower part of the gut. In the second case the position of the cancer and its not in any way affecting the outer surface of the caput caecum are noteworthy points. I find that out of 589 deaths in this asylum (and the cause of death is not conjectured, but is ascertained by post-mortem examination) twenty-nine, or nearly 5 per cent., have been caused by cancer; of this number eleven have been due to cancer of the stomach or intestinal canal. I have not data to enable me to comment on the proportional death-rate in other similar institutions from this disease. Were a uniform system of recording, tabulating, and publishing the causes of death in asylums and hospitals in force, clearly stating where the result was ascertained by post-mortem examination, a comparison of such fatal diseases would help in forwarding our knowledge of their history and habitat. In the third and last case, the symptoms and post-mortem appearances clearly point to a very recent strangulation. I believe the effusion found in the abdominal cavity took place within three hours, between the time I examined her and her death. That the strangulation should have affected the parts it did seems strange to me. The largeness of the portion of intestines strangled undoubtedly caused the rapidity of death; death in this case really resulted from shock.

SALICYLATE OF SODA IN ACUTE ORCHITIS COMPLICATING GONORRHOEA.

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THE marked and speedy relief of pain which follows the administration of salicylate of soda in rheumatic inflammation of the joints has been for some time past a matter of common clinical observation. The success which I have myself had with this drug in treating these affections led me in the autumn of 1880, while in charge of the Shanghai General Hospital, to give it a trial in a case of acute epididymitis occurring as a complication of gonorrhoea. Since then I have had but two satisfactory opportunities of repeating the experiment; I regard, however, the results obtained in these three cases as sufficiently good to warrant further trial of the remedy, and, indeed, entertain the hope of finding by

more extended experience that we possess in salicylate of soda a drug which exercises something very like specific influence over the disease.

CASE 1 was admitted to the General Hospital on September 13th, 1880. The patient contracted gonorrhoea about three weeks previously. For a week the left testicle had been somewhat swollen and painful. On the 11th the swelling increased considerably, and the pain became severe and constant. On the 12th he suffered a good deal, and was unable to leave his bed; that night the pain prevented him from sleeping, and he had fever. On admission, at 10 A.M., his temperature was 102°. The left testicle was about four times larger than the right, and the scrotum covering it was red, being stretched and glossy in front, and somewhat oedematous below. There was great tenderness. The urethral discharge had disappeared. I thought the tunica vaginalis implicated, and regarded the case as probably a suitable one for treatment by puncture, as recommended by Mr. Smith and others. Salicylate of soda was ordered in twenty-grain doses hourly until the pain should be relieved. At 4.30 P.M. four doses had been taken—namely, at 11.10, 12.10, 1.10, and 4. He had sweated profusely, and the pain had greatly diminished. At 8 P.M. his temperature had fallen to 100°, and the medicine was ordered to be continued at intervals of four or six hours. He slept well that night without an opiate. On the following morning (the 14th) his temperature was 98.4°, and he felt quite easy while lying down. Pain had altogether left him on the 15th, and the urethral discharge returned on that day. There was no relapse.

CASE 2.—A police constable, seen by me for the first time on the morning of April 8th, 1881. Patient contracted gonorrhoea about a fortnight before that date. One of his testicles had been swollen and painful for five days, but, until the morning of the 8th, he had been able to do patrol duty; being then no longer able to walk, he was compelled to go on the sick list as suffering from venereal disease. The inflammation was confined to one testicle, which was between two and three times larger than the other; it was hard and very tender. The scrotal skin was red, but not glossy. The body of the testicle was perhaps affected in this case along with the epididymis. There was apparently no discharge from the urethra. The patient's skin was hot to the touch, and his tongue was coated. He was ordered salicylate of soda in twenty-grain doses every two or three hours according to the effect produced. The testicle was to be suspended in hot water from time to time during the day. By evening six doses of the medicine had been taken, and the pain was greatly relieved. The pain diminished, he said, after the first dose, when he began to perspire. In the afternoon he sweated profusely. On the following morning (the 9th) he was quite easy when lying down, and could bear the testicle to be handled freely. On the 10th he declared that all pain had left him, and asked to resume duty. The testicle was then distinctly less swollen, though still enlarged and indurated. Convalescence was uninterrupted. The urethral discharge returned, but I have not noted the date of its reappearance.

CASE 3 was first seen on June 15th, 1882. The patient contracted gonorrhoea a month before that date. For about eight days the right testicle had been somewhat swollen and painful, and at the same time the urethral discharge began to diminish, and finally disappeared. On the 13th the inflammation seemed to be subsiding; but on the 14th the patient walked a good deal, and by the evening of that day the testicle was much more swollen than it had yet been, and the pain was severe and constant. On the morning of my visit he was forced to remain in bed. He said he had had an "awful" night from pain, and had been quite unable to sleep. His temperature was 101.8° F.; pulse 90; tongue clean and dry. His bowels were confined, one small hard motion on the morning of the 14th, and the same on the morning of my visit (15th). The inflamed testicle was at least four times larger than the other, hard, and very tender. The scrotal skin covering it was dull red, stretched and somewhat glossy in front. I ordered twenty grains of salicylate of soda every two hours, avoiding any other treatment, local or by astringents. The medicine was taken at 11.30 A.M., 1.30, 2.30, 4.30, and 7 P.M. After the second dose he had some ringing in the ears and began to perspire. After the third dose sweating was profuse (the weather was warm). At 4.30 P.M., after the fifth dose, the pain was relieved. At seven o'clock I saw him again; his temperature was then 101.6°, and his pulse 84; the pain was