the patient's admission to hospital. Probably therefore in all three cases the rash had made its appearance and faded away within 24 hours of the onset of the general infection, and it was certainly a striking feature of each case before meningeal symptoms suggested the diagnosis.

These cases tend to confirm the hypothesis put forward by Lundie, MacLagan,³ and others that there is a septicæmic stage in cerebro-spinal fever which precedes the meningitis, and fall into line with a most interesting case⁴ recently reported in THE LANCET in which agglutination tests afforded evidence to show that an infection of acute onset with an early rash, similar to that described above, was a meningococcal septicæmia which had stopped short of meningitis.

Clinical Notes :

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

PURPURIC AND CEREBRAL SYMPTOMS OCCURRING IN THE DEFERVESCEENCE OF ENGLISH MEASLES: TWO FATAL CASES.

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THE invasion of morbilli is often accompanied by grave disturbances of the hæmic and nervous systems, but occurrence of these serious lesions after the defervescence is not so well recognised.

CASE 1. Purpura, convulsions, and mental symptoms following defervescence; recovery.—A youth, aged 17 years, whose fever and rash had subsided on the fifth day after the first appearance of the severe eruption and who seemed to be well in the afternoon of that day, became suddenly unconscious at 7 P.M. He fell over on his right side, breathing stertorously, and convulsions affecting the whole body soon succeeded. These spasms lasted with but short remissions for 15 minutes. At the end of this period he was easily roused, but appeared terrified, as he could not see. The pupils were semi-dilated, but no optic neuritis or hæmorrhages in the retina were detected, the knee-jerks and the other reflexes were normal. Synchronously with the unconsciousness a coarse purpuric rash appeared on the face and neck, which quickly spread over his whole body. Within an hour of his seizure the youth became very restless, delirious, and made violent attempts to get out of bed, while "insanity of location" developed. Hyoscine hydrobromide 1/100 grain, morphine hydrochloride 1/4 grain, were injected, determining tranquillity and a peaceful sleep, which lasted for 14 hours.

On awakening a condition allied to that of "cerebral irritation" after head concussion had developed. In this condition he remained for four days, when, with the fading of the purpuric rash, he recovered completely. Retention of urine and incontinence of feces accompanied the mental symptoms. A marked retraction of the head on the first day after the seizure, coupled with Kernig's sign, determined a lumbar puncture, but the clear fluid obtained was normal to both chemical and microscopic tests.

On his recovery the patient had no recollection whatever of his attack, nor of any events occurring while mental aberration obtained, but he recollected the transient blindness at the incidence. On the nineteenth day after the appearance of the measles rash he was quite well.

CASE 2. Mental disturbance after defervescence; recurring hæmatemesis; death.—A youth, aged 15 years, on the second day after the severe measles rash had developed, and when it had begun to fade and the temperature had fallen to 100.8° F., commenced vomiting food with altered blood. A persistent hæmatemesis ensued, accompanied by severe constant pain over the fundus of the stomach, which was not distended, nor were any signs of perforation present. The obstinate vomiting was uncontrollable by drugs and caused great exhaustion, but ceased after 80 hours.

Soon after the incidence of the emesis the fading rash became much dusky, while the boy became delirious, restless, and lost his orientation power. With the cessation of the vomiting the mental condition became normal, the appetite returned, and food was retained. Except for a slight bronchitis he seemed well, and on the sixth day after the first sign of rash the temperature fell to normal. However, on the following day persistent hæmatemesis with great pain over the fundus recurred with a gradually rising temperature. The boy became cyanosed and collapsed, while the temperature rose to 105° F., and despite the exhibition of warm oxygen and cardiac stimulants he died of heart failure on the eighth day following the morbillar eruption.

CASE 3. Mental symptoms complicating defervescence.—A youth, aged 17 years, whose temperature and pulse had fallen to normal on the sixth day following that of the eruption, became on that day delirious, restless, and affected by "insanity of location." After persisting for 48 hours, without any febrile developments, he fell asleep and after a quiet night woke up in a normal condition. He suffered no other complication and was discharged well on the sixteenth day after the development of the rash.

CASE 4. Mental symptoms with the defervescence, accentuating later and followed by acute appendicitis; recovery.—A well-developed male, aged 39 years, showed marked restlessness as his acute rash faded and the temperature and pulse subsided on the fourth day after the

eruption showed itself. On the fifth day, while the temperature and pulse were normal, great restlessness associated with delusions of persecution and "insanity of location" developed. Persistent insomnia was unaffected by repeated doses of hyoscine and other hypnotics and the patient remained insane for three days. Incontinence of urine was nocturnal only. At the end of the eighth day he seemed to be quite recovered and kept well until the sixteenth day from the rash, when he complained of abdominal pain and again became slightly delirious. Acute appendicitis was diagnosed and a successful operation was followed by a complete recovery. Both ether and chloroform were used for a prolonged anæsthesia (1½ hours), but no further mental symptoms occurred.

CASE 5. Broncho-pneumonia accompanying the eruption, followed by mental symptoms, tremor, paralysis, and death.—A male, aged 21, presenting some signs of "giantism," developed a severe measles rash which had faded on the third day, although accompanied by a broncho-pneumonia. On the sixth day following the rash the patient became restless and slightly delirious. These symptoms increased during the following three days, but the chest signs were not serious. On the ninth day following the eruption a very marked restlessness and nervous anxiety as to his own condition developed, although the pulse was good and the bronchitis had diminished, while retention of urine and incontinence of feces obtained. The delirium increased, and a marked coarse tremor with slight rigidity affected both upper and lower limbs and the jaw. This state persisted for two days, when retraction of the head, absence of both knee-jerks, and well-defined Kernig's sign determined a lumbar puncture, though there was no optic neuritis. The cerebro spinal fluid was under no increased pressure, and both chemically and microscopically was normal.

The tremor increased considerably, and one or two convulsive seizures occurred before he became unconscious and died of heart failure on the twelfth day following the measles eruption. In this case the temperature never fell below 101° F. from the fourth day of the rash, and remained above 102° thence on till death. After death the rectal temperature was 104.5°.

The autopsy showed a mild broncho-pneumonia, some injection of the grey matter, and slight enlargement of the pituitary body.

Two other cases showing similar symptoms to Case 3 occurred subsequently.

Dr. Charles R. Box and Sir John Broadbent have suggested that these cases should be published to afford some starting point for future workers.

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NOTE OF A CASE OF RECOVERY AFTER THROMBOSIS OF THE SUPERIOR VENA CAVA.

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THE fact that recovery has taken place renders the following case of interest.

Patient, aged 42, a nurse in an institution, on Feb. 15th, 1917, while on night duty, was suddenly taken ill and vomited twice. She noticed then that her face was very blue. She continued on duty for three nights and then went to bed for three weeks, after which she was admitted to the Royal Devon and Exeter Hospital, Exeter, under the care of Dr. W. Gordon. On admission her face was cyanosed. All the superficial veins of head, neck, and upper part of chest were dilated and engorged. Venules were dilated down to the costal margin. Face, neck, and upper chest were much swollen, but there was no pitting on pressure and no oedema of the eyelids. The swelling gradually subsided with rest in bed, but the veins remain somewhat dilated and cyanosis of the face recurs from time to time. Very marked transient cyanosis after slight exertion on April 14th.

Clinical examination of the chest revealed nothing abnormal, except a localised musical systolic murmur to the right of the lower end of the sternum on admission. This murmur soon disappeared. The right kidney was unusually palpable, abdomen otherwise normal. No enlarged cervical or axillary glands. No tumour of breast. No oedema elsewhere. Urine normal. Blood count normal. A very thorough radioscopic examination of the chest was made early in April, and absolutely no evidence of aneurysm, mediastinal glands, or tumour of any sort could be found.

Examination has thus excluded any cause of external pressure on the superior vena cava, and the only diagnosis possible is some internal obstruction, probably thrombosis. Slight dilatation of the veins still persists, but the patient feels well and is anxious to return to work.

The case is reported by permission of Dr. Gordon.

HOSPITAL SUNDAY FUND AT BRISTOL.—The Hospital Sunday Fund collections in Bristol for 1917 amounted to £3000. This is a record, and the Lord Mayor of Bristol (Dr. Barclay Baron) was congratulated by the members of the committee on the result of his efforts. £2800 have been given to the larger medical charities and the balance allocated to the smaller medical institutions. The Royal Infirmary received £1218, which is more than the whole collection for the first year of the Fund (1899).

³ THE LANCET, 1916, ii., 1054. ⁴ THE LANCET, 1916, ii., 1010.