THREE RARE CONDITIONS OBSERVED ON BOARD A HOSPITAL SHIP.

BY MAJOR J. C. CAIRD, M.D., F.R.C.P.Ed.,
Royal Army Medical Corps,

CAPTAIN A. F. FLETCHER, L.R.C.P.Ed., L.D.S.GLAS.,
Royal Army Medical Corps,

AND

LIEUTENANT G. R. STALEY, M.B., B.S.,
Royal Army Medical Corps.

Except when taking on casualties near the scene of action the routine work on a hospital ship is not usually of much professional interest for patients come on board with clinical investigations complete, the diagnosis ready made and in many cases well advanced in convalescence.

It therefore aroused unusual interest to find the three cases recorded here on one shipload of patients transferred from the Middle East.

The cases were:

1. Dwarfism due to pituitary dysfunction.
2. Myotonia congenita.
3. Transposition of the viscera with dextrocardia.

Circumstances did not permit of much scientific investigation neither were any references available to justify our statements so the case reports are presented with little commentary. We hope our three swans will not appear to others as geese.

Case 1.—Age 21.
Diagnosis.—Pituitary dysfunction.
Army History.—The patient served in France in 1940 until June when his unit was evacuated from Marseilles. He stated that by mistake he boarded the wrong ship and was taken to Palestine where he served until March, 1941. He was then recommended for transfer to the United Kingdom by a medical board which found him unfit for service overseas owing to his small stature and the fact that he had been in hospital several times complaining of abdominal pain for which no cause could be found and which was considered to be due to neurosis. Wassermann reaction negative. He was furthermore a bad soldier, had been in trouble on several occasions, and was considered to be mentally dull, irritable and insubordinate.

Patient’s Complaint.—Frequency of micturition, pain in the stomach and constipation.

Previous History.—In childhood he had scarlet fever, measles, whooping-cough, and double pneumonia. When 2 years old he underwent operation for right inguinal hernia. At 6 years of age he was in a sanatorium. At 14 he had an appendicectomy, at 17 his coccyx was removed and at 18 he was operated on for double strangulated inguinal hernia.

Examination.—The patient was very small with childish features and
prominent forehead. Weight 7 stone 12 pounds. Height 4 feet 8 inches. Chest 31 inches. Expansion 1 inch. Abdominal circumference 32½ inches. He had a large head, prominent abdomen, short arms and legs and small hands and feet. The skin was fine. There was noticeable

adiposity of the abdomen, breasts and buttocks. The pubic hair was of adult male distribution and the body hair and hair of the face were normal though fine and downy. The genitalia were healthy and of adult development. The voice had broken though thin and piping. There were scars on the body corresponding to his rather chequered surgical history. Men-

Case 1.—Patient standing beside man 6 feet 0 inches tall.

Case 1.—Radiograph of sella turcica.
tally, he was cheerful, self-assertive, quick-witted in a childish way but irresponsible and unable to sustain concentrated thought. No abnormalities were found in the cardiovascular, respiratory or nervous systems.

Genito-Urinary System: Frequency of micturition. No abnormal constituents were found in the urine.

Abdomen: There was pain and tenderness in the left upper quadrant of the abdomen which could not be elicited when the patient’s attention was distracted.

Radiological Examination.—Skull: In the frontal and occipital regions there was an area of bony thickening suggestive of early Paget’s disease. The sella turcica was well defined and smaller than normal. There was a faint shadow above and anterior to the sella, suggestive of calcification.

Progress.—A few days after admission to the hospital ship he developed a left-sided lobar pneumonia and pleurisy. Treatment with sulphapyridine was begun but had to be abandoned after a few days’ intermittent treatment as he proved to be sensitive to the drug. The leucocyte count which was never higher than 6,000 per c.mm. dropped to 3,000 per c.mm. after twenty-four hours’ treatment and rose again when the drug was discontinued. The fall in the count was due to a granular leucopenia. He recovered satisfactorily from the pneumonia but then developed jaundice which cleared up some ten days later.

Family History.—Nothing is known of the grandparents except that they died in old age. He had fifteen uncles and eighteen aunts who are of normal stature excepting one uncle on his father’s side who is 6 feet 5 inches tall. His father is 5 feet 2 inches and the mother 5 feet 10 inches. Five sisters seem to be of normal proportions.

Comments.—This is a case of pituitary dysfunction of which the chief features are stunted growth, normal sex development and increased deposition of fat on the abdomen, buttocks and breasts and, as in most cases of pituitary dysfunction, the signs show that there is partial and not complete hypofunction of the anterior lobe. If the assumption be correct that the acidophil cells in the anterior lobe control growth and the basophil cells influence the gonads then, in this case, there is hypofunction of the acidophil cells only. Hypofunction of the acidophil cells may be caused by intra-sellar lesions, supra-sellar lesions and intracranial lesions at a distance. In this case one has to consider the first two causes; for the latter there are neither signs nor history. Supra-sellar lesions are all destructive with consequent depression of the activities of the whole pituitary gland, and the most common is probably the supra-sellar cyst which usually produces the Fröhlich syndrome with abnormal distribution of fat, genital infantilism and sometimes dwarfism. Radiologically there is flattening of the sella turcica, and distortion or destruction of the clinoid processes. Sometimes the cyst is calcified and can be clearly seen. In the present case the adiposity of the abdomen, breasts and buttocks resemble the Fröhlich type, and a faint shadow above the sella may possibly be a small calcified cyst, but the other features are lacking and on the whole the evidence for a supra-sellar cyst is hardly convincing enough. Intra-sellar tumours will produce symptoms of hypoplasia or a mixture of hyperplasia and hypoplasia according to the elements of the anterior lobe affected and radiography usually shows enlarge-
ment of the sella with attendant pressure on neighbouring structures. In this case no definite cause can be found. A possible explanation may be that in one of the patient's many illnesses in childhood, there was a thrombosis affecting mainly the acidophil cells. It is interesting to note that the patient has a very small father and an unusually tall paternal uncle, but here again the evidence can only give rise to surmise. Unfortunately supervening illnesses made it impossible to investigate this case more fully.

Case 2.—Aged 21.

Diagnosis.—Myotonia congenita.

Army History.—The patient was admitted to a field ambulance at the end of 1940 and was transferred to a general hospital as a possible case of upper motor neuron lesion. There, a diagnosis of myotonia was made and a medical board recommended him for transfer to the United Kingdom. He was described as mentally dull and quite incapable of his work as a gunner.

Patient's Complaint.—Weakness and stiffness of the hands.

History.—He had suffered from childhood with an affection of both hands which prevented him from relaxing his grip normally, in particular if he had been holding any heavy object or grasping a small object tightly. This disability had been more troublesome since he joined the Army and he had also noticed some muscular weakness on lifting heavy objects. He stated that there had been occasionally a similar stiffness in the legs, particularly on the day following a march of eight miles or more, but he was vague about the onset and duration of these attacks.

Family History.—The patient gave very little information about his family but stated that his father had been affected by a similar condition since childhood. No other member of the family seems to have been affected. No history of cataract could be elicited.

Examination.—The patient was thin and below average height. Mentally, he was dull, answering questions slowly and unintelligently. He gave a disconnected story of his complaint either because of a poor memory or mental inertia. Muscular development appeared to be normal, with the doubtful exception of the hands.

On examining the hands, the small muscles, thenar and hypothenar eminences were rather smaller than normal. The muscles of the forearms and arms were well developed. Muscle power was equal in both hands and the patient had a powerful grip but had some difficulty in lifting a heavy object horizontally, seemingly due to weakness of the extensors of the wrists. After gripping an object firmly there was difficulty of relaxation accompanied by some curious contortions. At first the elbows, wrists and fingers were held in an attitude of flexion. Extension then began in the thumbs and fingers. Before extending the wrists and elbows the digits were slowly flexed and extended at the knuckles in a manner resembling bilateral athetosis. The process of relaxation took about eight seconds and was accompanied by slight pain extending for some three inches above the wrists. The condition remained unaltered after repeated use of the muscles except that the power of the hand grip was slightly lessened. Similar muscular spasm was not elicited in the upper limbs. The myotonic reaction was not obtained from the muscles involved. The reflexes were all present and within the normal range. Apart from the conditions already described no systemic abnormalities were found.

Progress.—Ten grains of quinine hydrochloride were given twice a day for ten days but there was no alteration in the muscular spasm.
Comments.—This was evidently a genuine case of Thomsen’s disease although differing from the typical case in that the hands were affected much more than the lower limbs. Although no spasm was seen in the legs there is no reason to doubt the patient’s statement that it did sometimes occur especially after the fatigue of a route march. In any case one would be unlikely to see this occasional spasm whilst the patient was on board a hospital ship in the tropics, living under ideal conditions and not exposed to any aggravating factors of cold or hardship. The congenital nature of the disease is suggested by the one definite statement of the family history,
namely that his father suffered from a similar disability from childhood onwards.

A possible alternative diagnosis was myotonia atrophica, a condition in which there is marked inability to relax the flexor muscles after grasping strongly with the hands. But myotonia atrophica manifests itself later in life; there is atrophy of the muscles of the forearms and hands, facial and tongue muscles besides certain of the muscles in the lower limbs. There is also a familiar history of cataract. Mention has been made of some wasting of the small muscles of the hands in this case but if really present this was so slight that it was probably due to lack of use and not to any pathological process. For a diagnosis of myotonia atrophica then the essential signs of muscular atrophy were lacking although in this case there was a superficial resemblance. It is recorded that more or less mental impairment may be associated with Thomsen's disease.

Case 3.—Aged 25.

Diagnosis.—Peptic ulcer and transposition of the viscera.

Army History.—The patient had been under treatment for a persistent peptic ulcer for over three months and had been recommended for transfer home by a medical board.

Patient's Complaint.—Indigestion.

Previous History.—Epigastric pain and heartburn coming on after food during the past four months. Otherwise there was nothing of interest.

Examination.—The patient was a well developed man of average height.

Abdomen: There was tenderness in the epigastrium. On percussion stomach resonance was present on the right side and liver dullness on the left down to the rib border. The spleen was not palpable but, so far as could be made out by percussion, was on the right side.

Chest: The apex beat of the heart was on the right side in the fifth rib interspace just inside the mid-clavicular line. Although not very noticeable it was easily identified. The heart sounds were closed and pure. The pulse rate was 80 per minute, regular in time and force.

Apart from the conditions noted no abnormalities were found. The patient was right-handed.

Radiological Examination.—On screening and in a film the heart was seen lying with the apex to the right. A gas bubble could be seen in the stomach below the right rib border and the liver shadow on the left.

Comments.—This was an everyday case of peptic ulcer and the interest lies in the transposition of the viscera and dextrocardia. The patient had been seven years in the Army and had enjoyed good health until the peptic ulcer developed. He said that he had been aware of the dextrocardia for some five years (he was, in fact, very proud of it) and so far as he knew there were no other cases in the family.

We are indebted to Colonel Edwards, C.M.G., D.D.M.S., and Lieutenant-Colonel Greaves, D.S.O., M.C., for permission to publish these case reports. We also wish to thank Lieutenant R. H. Jones and Corporal McCurdie for the photographs.