in diagnosis would largely be obviated if serum-amylase investigations were more often employed in elucidating obscure cases of upper abdominal pain.

Subacute pancreatitis is not a rare condition, and its diagnosis depends largely on being aware of the existence of this clinical syndrome.

Summary

Subacute pancreatitis is a clinical entity readily differentiated from acute haemorrhagic pancreatitis and other abdominal emergencies.

Patients suffering from this condition present as an acute abdominal emergency but settle down on conservative treatment.

The condition is very apt to recur. Of the 19 cases presented 13 were recurrent attacks.

It is suggested that estimation of the serum-amylase level should be more widely employed to differentiate this condition from other acute abdominal lesions.

I would like to thank Professor F. A. R. Stammers for his help in presenting this paper.

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REPORT ON AN OUTBREAK OF INFLUENZA IN THE ARMY

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During the months of January and February, 1949, several Army units in Mid-West District, which comprises the whole of Wales and the adjoining English counties, reported that cases of influenza were occurring among their personnel. The first cases to be diagnosed as influenza occurred on Jan. 19 in units stationed at Malvern. The second unit affected was a Boys' Battery of the Royal Artillery, near Rhyl, on Jan. 24. On Jan. 31 cases were reported at Lichfield and on the following day at Donnington. Oswestry garrison were the next victims, on Feb. 7, and by Feb. 21 cases were also being reported from Nesscliffe, near Shrewsbury, Wrexham, and Tonfanau, on the Welsh coast. A total of 646 cases were notified from all Army units in Mid-West District from the start of the outbreak on Jan. 19 to Feb. 21.

Features of the Outbreak

It had been previously impressed upon all ranks that if an epidemic of influenza did occur it was of prime importance to report sick early. Nearly all soldiers affected attended their medical officer within a few hours of experiencing their first symptoms. It is interesting to note that, in one instance only, a soldier remained in his barrack room for over 24 hours before reporting sick. Eighteen out of twenty of his comrades in the same hut developed influenza later.

The main features were a sudden onset with frontal headaches, a transient sore throat without lymph-node enlargement or tenderness, a slight cough, and a feeling of general weakness and lassitude, coupled with aches and pains in the arms and legs and in the lumbar region. Mild rigors preceded the rise in temperature, which was in the neighbourhood of 103° F. (39.4° C.), although a few cases did develop temperatures of 105° F. (40.6° C.). Circumoral pallor, injection of the conjunctivae, and profuse nasal discharge were absent. Epistaxis occurred in a few cases at Lichfield, but was not a common feature. The temperature gradually

dropped, and by the fourth day of the disease most patients were afebrile. Chest complications did not occur and after-effects were absent amongst the great majority of male patients. In the few cases occurring in the W.R.A.C. or A.T.S., however, lassitude and post-influenzal depression were noted.

Patients were treated in camp reception stations until their temperature subsided, and were then transferred to barrack accommodation for a convalescent period of two days before starting duty. The average duration of the illness from the initial symptoms until return to full duty was between six and eight days.

Treatment.—This was of a palliative nature. Warmth, rest in bed, and plenty of fluids by mouth were the main principles adopted. Salicylates and Dover's powder were given during the pyrexial period, and codeine if the cough proved troublesome.

Laboratory Investigations

When it was obvious that a definite outbreak had occurred each garrison was visited and throat washings in 10–15 ml. of sterile saline were taken from selected cases. Febrile patients or cases in the early stages of the illness were chosen so far as was possible. The washings were packed in ice and delivered within six hours to the Central Public Health Laboratory, Colindale, and the National Institute for Medical Research, Hampstead, where they were examined for the presence of virus. Broth was not added to the washings: the addition of 5 ml. would have improved the chances of recovering the virus.

The first of the paired sera required for the Hirst and complement fixation tests was taken at this visit. This was held in the refrigerator at 2–3° C. until the second of the pair was taken, on the twelfth to fourteenth day of the disease.

The sera were examined by Dr. A. P. Goffe at the Central Public Health Laboratory, Colindale; the results are indicated in brief in the tabulated schemes which follow.

TABLE I.—Cases at Rhyl (all males)

Case No.	Age in Years	Symptoms					Temperature on Day of Disease
		Shivering	Head-ache	Sore Throat	Cough	Muscle Pains	
1	16½	++	+	+	+	+	100.8° F.; 1st (38.2° C.)
2	15½	++	+	+	+	—	101.6° F.; 1st (38.7° C.)
3	20	++	++	+	+	±	97.0° F.; 3rd (36.1° C.)
4	17½	++	+	—	+	+	98.0° F.; 4th (36.7° C.)
5	16½	—	++	+	+	±	97.8° F.; 3rd (36.5° C.)
6	16	+	++	++	+	—	98.0° F.; 4th (36.7° C.)

Saline Washings.—Report on Feb. 2, 1949: Type A virus isolated in two cases from washings taken on Jan. 28, 1949.

Hirst Test.—Four cases showed fourfold rise of antibody inhibiting fowl red-cell agglutinin (A PR 8) in second serum. Two cases in which the first serum (taken on the fourth day of illness) showed a high titre (1 in 48) had a twofold rise on the 14th day in antibody to A PR 8 agglutinin.

C.F.T.—Second sera showed 16- to 64-fold rise in complement-fixing antibody to Type A strain antigen.

Result.—Influenza type A.

TABLE II.—Cases at Lichfield (all males)

Case No.	Symptoms						
	Age	Shivering	Head-ache	Sore Throat	Cough	Muscle Pains	Temperature on Day of Disease
1	18	—	—	Dry	+	—	101.6° F.; 2nd (38.7° C.)
2	18	—	+	Dry	+	+	101.0° F.; 2nd (38.3° C.)
3	19	+	—	Dry	+	—	98.4° F.; 2nd (36.9° C.)
4	22	+	+	+	—	+	102.8° F.; 1st (39.3° C.)

Saline Washings.—Virus was not isolated from these washings.
C.F.T.—Second sera showed 4- or 8-fold rise in titre of complement-fixing antibody to Type A strain antigen.
Result.—Influenza type A.

TABLE III.—Cases at Donnington (all males)

Case No.	Symptoms						
	Age	Shivering	Head-ache	Sore Throat	Cough	Muscle Pains	Temperature on Day of Disease
1	19	+	+	—	—	+	99.6° F.; 3rd (37.5° C.)
2	18	+	+	—	—	+	99.8° F.; 3rd (37.7° C.)
3	18	+	+	—	—	+	98.0° F.; 3rd (36.7° C.)
4	19	+	+	—	—	+	100.0° F.; 2nd (37.8° C.)
5	20	—	+	—	+	+	100.2° F.; 3rd (37.9° C.)
6	19	+	+	—	+	—	100.8° F.; 3rd (38.2° C.)
7	20	+	—	+	+	—	100.2° F.; 5th (37.9° C.)
8	18	+	+	—	+	—	99.4° F.; 3rd (37.4° C.)

Saline Washings.—Type A strain of virus isolated in one case from washings taken on Feb. 9, 1949.
C.F.T.—Second sera showed 8- to 32-fold rise in titre of complement-fixing antibody to Type A strain antigen.
Result.—Influenza type A.

Complement fixation tests on sera from four cases at Malvern showed results with Type A strain antigens similar to those in the Tables.

Preventive Measures

Early diagnosis and rapid isolation of the patient were aimed at in order to check the spread throughout each unit. Strict attention was paid to the adequate ventilation of barrack rooms and to the spacing of beds to the optimum. General measures on the maintenance of the health of the troops, the shaking and airing of blankets in the open, and the sweeping of floors, previously sprinkled with water, were adopted. Routine gargling and the spraying of rooms with disinfectant were not carried out, nor was prophylactic inoculation attempted. Unit cinemas were closed for a short time in two areas at the height of the outbreak, but the numbers of cases occurring did not warrant restricting the movement of troops or cancelling the intake of National Service men to training establishments.

The movements of the first three cases occurring in each unit prior to the onset of symptoms were investigated, with, however, inconclusive results. No direct connexion with the European epidemic could be traced.

Summary

An outbreak of influenza of the Virus A type occurring in Army units in Wales and the West Midlands is reported. Symptoms, treatment, laboratory investigations, and preventive measures adopted are described.

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SPONTANEOUS INTRA-ABDOMINAL HAEMORRHAGE

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Spontaneous intraperitoneal haemorrhage—i.e., that occurring without any obvious cause such as cirrhosis of the liver (James, 1930) and rupture of aneurysm—has been recorded in 26 cases*—19 collected by Berk, Rothschild, and Doane† (1941), three reported by Marks and Freedlander (1945), and one each by Keusenhoff (1934), Matheson (1934), Crile and Newell (1940), and Haugen (1944).

In only eight of these cases were necropsies performed. In Keusenhoff's case and in two cases recorded by Moorehead and McLester (1936) a definite arterial rupture was found; but in the remaining five no single vessel could be held responsible, though in Matheson's case the haematoma was related to the branches of the ileocolic artery. Four of the cases had clinical or morbid anatomical evidence of hypertension (Moorehead and McLester two, and the fatal case of Marks and Freedlander) or arteriosclerosis (Keusenhoff). Haugen's case, which followed appendicectomy, like those of Matheson (1934), Churchman (1911), and Hartley and MacKechnie (1934), showed no evidence of vascular disease, but in these cases blood-pressure readings before the catastrophe or reports on the histology of the kidneys are lacking.

Three cases of spontaneous abdominal haemorrhage, two of which included a haemoperitoneum, are described below.

Case 1

A woman aged 58 was admitted with a four-months history of discharging ear (? cerebral abscess). She had had pain in the left hypochondrium for one month accompanied by vomiting when severe. Investigations before admission showed: haemoglobin, 66%; leucocytes, 17,300 per c.mm. (89% neutrophils); serum Wassermann reaction, negative.

On examination the temperature was 99° F. (37.2° C.), pulse 110. She had a profuse discharge from the right ear, and diplopia on looking above the horizontal. The abdomen appeared normal. The B.P. was 140/80. Leucocytes numbered 43,000 per c.mm. Two days after admission she had severe upper abdominal pain and urge to defaecate, but the bowels were not opened. On examination she was pale, the pulse was 160, and there was extreme tenderness in the upper half of the abdomen. She died in less than an hour.

Necropsy.—Intracranial disease was not discovered. Very marked purulent bronchitis and emphysema were found. On opening the abdomen large blood clots were seen in the peritoneal cavity. The greater omentum and lesser sac also contained blood clot. Careful dissection of the branches of the coeliac axis, the superior mesenteric artery, and the tributaries of the portal vein failed to reveal any macroscopic evidence of structural change in their walls or of thrombosis. Smaller vessels within the area of haemorrhage in the pancreas were also minutely examined without any abnormality being detected. Both renal arteries contained thrombi, the kidneys appearing very pale but otherwise normal. The bowel contents were black, but there was no macroscopic lesion in the intestinal mucosa.

Histology.—*Omentum:*—A huge area of haemorrhage occupied the omental fat tissue, which included a central area of

*Since submission of this paper a case of malignant hypertension with haemoperitoneum has been published by De Navasquez and French.

†The case of Florence and Ducuing (1913) was traumatic.