failed. In two patients 2 c.cm. of sterile Indian ink was injected into the abdomen, and chest taps were performed later. In each case the fluid in the chest showed the same concentration of Indian ink as that in the abdomen. That the Indian ink did not arrive in the pleural fluid by way of the blood stream was considered established by study of the blood, since no evidence of Indian ink could be found in the leucocytes on microscopical examination. This experiment suggested that the abdominal fluid may arrive in the chest by the same paths as the Indian ink, or vice versa. The probability is that the pathways are lymphatics, which pass through the interstices of the serosal cells under the diaphragm, thence to the supra-diaphragmatic lymphatics and so into the chest.

Summary

Two cases of Meigs's syndrome (fibroma of the ovary with pleural effusion and ascites) are described.

This condition is probably rare, but without doubt some cases go unrecognized, since they are often ill and simulate advanced carcinoma of the ovary or severe cardiac, renal, pulmonary, or hepatic disease. This is most unfortunate, since such patients' would be denied an operation which gives excellent results.

The syndrome must always be considered in a differential diagnosis of abdominal and chest effusions, and as only one other case has been described in the British literature in the last 20 years we feel that the occurrence of two cases within a year among a relatively small population suggests that some cases are being overlooked.

We wish to thank Prof. Dugald Baird and Dr. John Smith for their interest and encouragement.

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Medical Memoranda

Fibrositis of the Rectus Abdominis Muscles causing Dyspepsia

Numerous cases of dyspepsia, or pain after food, fail to reveal any physical abnormality on ordinary routine examination. Even x-ray investigation of the stomach, duodenum, and gall-bladder is equally sterile of definite evidence of disease, and vague diagnoses of gastritis, duodenitis, or chronic cholecystitis are made. The patient continues to complain of indefinite pain—sometimes soon, sometimes late after food. He undergoes long courses of careful diet and takes much alkaline powder. Finally he or she drifts into a hypochondriac state, having given up all the joys of life which are associated with eating, drinking, and smoking.

In treating such cases one will be well repaid by making a careful examination for tender areas of fibrositis in the upper ends of the rectus abdominis muscles—particularly in their origins from the surfaces of the fifth to the seventh costal cartilages, the xiphoid cartilage, and the costo-xiphoid ligament. In a surprising number of cases tender nodules of fibrositis will be found, and after these have been "broken up" and treated by skilful massage the dyspeptic symptoms will disappear as if by magic and the patient will regain robust health.

I have had some difficulty in getting masseuses to carry out the treatment properly. The massage should be done with the tips of the fingers, working the skin in a circular movement and pressing upon the tender area as deeply and firmly as the patient will allow—short of bruising the tissues. Light stroking movements have as little curative effect as sticking on a ten-and-sixpenny stamp, the usual fee for the attendance. Masseurs should have three main qualifications—very sensitive fingers, very strong fingers, and complete ruthlessness! Massage should be given twice or, at the most, three times a week; there is always a certain amount of reaction and general tenderness after "breaking up" the fibrositic nodules, and this must be allowed to settle down before the next treatment is given. But, by starting with light pressure and gradually increasing it, a skilful masseur will soon take out the tenderness. An infra-

red lamp will help considerably, but it should be left with the patient to use for hours at a time.

The rectus abdominis muscle is supplied by branches from the fifth to the twelfth thoracic segments. These same segments also send branches to the coeliac plexus. Fibrositis may cause a reflex action in the abdominal organs, giving rise to spasm or dysfunction.

ILLUSTRATIVE CASES

Case 1.—Mr. A., aged 52, was well till five years ago, then began to have indigestion. The pain had no time relation to food, but was sometimes relieved by it. X-ray examination showed an active and normal duodenum and gall-bladder. His sinuses were radiographed and found to be normal; likewise his spine. For a month he was "investigated" in the private ward of a large hospital, but no disease could be found, and he got only a little temporary relief from the rest. One physician told him he was suffering from aortitis, but a second negated this by means of a cardiogram. When I first saw him he looked ill and debilitated. He felt sick and had pain after every meal, but seldom vomited. When he could vomit he felt relief. He was living on a special diet of milk, fish, and breast of chicken. I asked him to put his finger on the spot where he felt pain, and to my surprise he indicated the right costal margin, where I found a patch of acutely tender fibrositis, which he would hardly allow me to touch. I massaged this, and he felt better that same day. I got a good masseuse to treat him with massage and an infra-red lamp, and in three weeks he was a perfectly well man, taking full meals with beer, and sleeping well and putting on weight. He also smoked and took cocktails with no bad results. The only medicine I gave him was 15 minims of dilute hydrochloric acid with meals, and this he discarded after two weeks.

Case 2.—Mr. B., aged 44, told me he had had a duodenal ulcer for the past 17 years. His gall-bladder was removed nine years ago after x rays had shown the ulcer to be healed. But three years later he had severe haematemesis, and the ulcer became active again. Since then many radiographs had shown the ulcer to be healed, but he still complained of violent pains after food, particularly at night. He had much business worry. On examination I found marked tender fibrositis in the upper ends of both rectus abdominis muscles. No medicine was given, and a course of massage and infra-red treatment cured his "indigestion."

Case 3.—Mr. C., aged 68. His was an old duodenal case with a history of melaena on two occasions. Recent bismuth meal examinations revealed a healed posterior duodenal ulcer. Nine months ago he began to suffer acute pain in the upper abdomen, which had no relation to food, but which was always worse at night and even woke him up most nights. He had tender fibrositis in the origin of the right rectus muscle. I massaged this, and next day he telephoned from his home 50 miles away that he had slept all night without pain for the first time in nine months. He has had a course of massage, and has not had any trace of pain since.

London, S.W.7.

R. SIMPSON HARVEY, M.B., B.S.Lond.

Diaphragmatic Hernia with Torsion of the Stomach and Acute Obstruction

The case described below came under my care, and the operation revealed such unusual conditions that it seems worth recording.

CASE RECORD

Mrs. X., aged 57, was admitted on April 2, 1943, to an emergency hospital with symptoms of acute pain in the chest and distension of the upper part of the abdomen. There was a history of a diaphragmatic hernia, diagnosed and confirmed by x-ray examination at the King Edward VII Hospital, Windsor, in 1939. The symptoms at that time were of epigastric discomfort relieved by belching. This continued at varying intervals, and she was admitted to the same hospital in September, 1941, when she was also found to have a left inguinal hernia. A radical cure was performed on this, and the patient made an uneventful recovery, being discharged on Oct. 11. The attacks of discomfort in the upper abdomen continued at irregular intervals, and on April 2, 1943, she was seized with acute pain in the left side of the chest. This was accompanied by ineffectual attempts at vomiting. She was admitted the same evening to the emergency hospital, and on examination was found to be greatly distended in the epigastrium, the rest of the abdomen being flat. The appearance was very striking, and was clearly due to a greatly distended stomach. Her pulse was low (64), and temperature subnormal (96.6°). There were sounds of borborygmi to be heard in the left side of the chest.

An operation was performed without delay through a left paramedian incision. The stomach at once presented itself, very tense and like a distended rubber balloon. By passing the hand round the left-hand surface of the stomach it was possible to reach the edge of the diaphragmatic aperture, and by manipulation the intra-thoracic portion of the stomach was successfully withdrawn. The moment this was done the whole stomach turned over from right to left. In its distended condition it was approximately 18 to 20 in. long and 8 or 9 in. in diameter. It was clear that there was then no obstruction at the pylorus. By turning the stomach over to the right it was possible to see the opening in the diaphragm, which was to the left of the oesophageal opening, and admitted two fingers easily. The opening was occluded by a stout double catgut suture, and the abdomen was closed. On April 5 there were signs of a left-sided basal pneumonia, which cleared up in a few days, and the patient was discharged on April 19 with no symptoms.

She was x-rayed again on June 9. This showed a rather large stomach, but no sign of any recurrence of the hernia. She has remained entirely free from gastric symptoms since her discharge from the hospital, and six months after the operation had had no further trouble.

COMMENT

The case is interesting on account of the condition found at operation, where the stomach was twisted and enormously distended, and by the rapid recovery of the gastric functions in spite of the excessive stretching of the muscular and mucous wall of the stomach. How the torsion had occurred must be a matter of pure conjecture, but the impression at the time of the operation was that the pyloric end of the stomach had been dragged or twisted to the left side into the hernial orifice. The original radiograph, taken in 1939, showed the ordinary condition of herniation of the fundus.

London, W.1.

HAROLD GARDINER, M.S., F.R.C.S.

Varicella and Herpes Zoster in the Same Patient

It is very unusual to encounter the characteristic eruptions of chickenpox and herpes in the same patient, and I am not aware of any record of a similar case in a child. The significant features appear to be the allergic history and the somewhat diffuse distribution of the herpetiform eruption apparently involving the anterior divisions of numerous nerve roots.

The patient, a boy aged 5½ years, is an only child, sensitive, highly strung, precocious, allergic to pollens and mixed inhalants group. The father has a history of allergy in his childhood. The boy developed typical chickenpox on Dec. 29, 1943. The attack was mild, being afebrile after two days. On Jan. 22, 1944, there was an eruption of herpetic vesicles on the right side extending from the clavicle and deltoid area over the chest and abdomen to the upper half of the right thigh. The eruption was limited by the midline in front and by the mid-axillary line. Apart from the discomfort of the eruption, there were no unusual symptoms until Jan. 27, when the temperature rose to 102° F. and the next day to 104°. It gradually subsided, and was normal by Feb. 3.

On Feb. 2 he had some malaise accompanied by loss of appetite, dirty tongue, enlarged and tender liver, and pale stools; there was no obvious jaundice to the naked eye, but bile was present in the urine. This lasted two days and rapidly cleared up. On Feb. 14 he had an attack of typical asthma.

I am indebted to Dr. S. R. Foster, the family physician, for his interest and co-operation, and for some of the additional clinical notes.

Belfast.

F. M. B. ALLEN, M.D., F.R.C.P.

Concurrent Herpes Zoster and Varicella

The following case seems worthy of record if only for its extreme rarity. The relation between herpes zoster and varicella was first noticed by J. Van Bokay in 1892. Since then the relationship has attracted much attention, and most practitioners are agreed as to the increased incidence of herpes zoster in epidemics of varicella. Up to 1930 Netter of Paris had been able to collect only 20 cases of concurrent herpes zoster and varicella, and some eminent authorities were inclined to attribute the concurrence to mere coincidence. Cranston Low has advanced the theory that both diseases are due to the same virus, in one case affecting the nervous system and in the other being blood-borne. The case described below seems to favour this theory.

A man aged 63 came to see me on March 9, 1944, complaining of pain in the left hypogastrium with a generalized rash. On examination I found typical symptoms of varicella as to both lesion and distribution. In addition the painful area showed typical herpes zoster. He stated that he had felt "off colour" on March 5. By evening he had pain in the left side and found some "blisters," and at the same time felt an irritation of the face and scalp. On the morning of the 6th he was covered with a well-developed rash. Both rashes have since run a normal course. The patient is a chronic bronchitic who has not worked for months, and he shares a house with another elderly man. There is an epidemic of varicella at the time of writing (March 29).

Additional points of interest are: (1) the coincident appearance of the rashes; (2) the age of the patient.

Warrington, Lancs.

J. J. MANNING, M.B.

The Professional Advisory Committee of the U.S. Office of Vocational Rehabilitation held its first meeting in Washington on March 3. The committee, made up of 20 specialists in medical and allied fields, was appointed to provide professional guidance in mapping the new State-Federal programme for medical and surgical care under the Barden-LaFollette Act. In opening the meeting Mr. Paul V. McNutt stressed the Federal Security Agency's desire to aid the States in providing physical restoration services which will conform to the high professional standards recognized by the national and State medical associations and by the hospital associations.

Reviews

GENERAL AND SPECIAL BIOCHEMISTRY

Annual Review of Biochemistry. Edited by James Murray Luck. Associate Editor, James H. C. Smith. Volume XII. (Pp. 704. 31s. 6d.) California: Stanford University P.O., Annual Reviews, Inc.; London: H. K. Lewis and Co.

Vitamins and Hormones. Edited by Robert S. Harris and Kenneth V. Thimann. With a foreword by E. V. McCollum. Volume I. (Pp. 452. \$6.50.) New York: Academic Press, Inc.

The twelfth volume of these annual reviews is, like earlier ones, a co-operative effort of American and British experts—three chapters having been contributed by writers in this country and the other twenty-one by United States scientists. The standard of previous volumes is admirably maintained. The individual articles are detailed, highly technical, authoritative surveys generally covering a period of four or five years, which is about the time allowed by the editors before a subject is picked up again. Readers of this *Journal* will find much here that bears indirectly but fundamentally on medical practice, if sometimes possibly only on future practice; but they will also be able to read with a more direct interest chapters on nutrition in 1941 and 1942 (C. S. Lanford and H. C. Sherman), on synthetic drugs (T. C. Daniels), on the metabolism of proteins and amino-acids (H. B. Cook and J. W. Dubnoff), of fat (G. O. Burr and R. H. Barnes), and of carbohydrate (H. J. Deuel, jun.), as well as accounts of the water-soluble and the fat-soluble vitamins (R. J. Williams and K. Hickman respectively). Of practical interest, in a rather different way, are chapters on the electron microscope in biology (L. Marton) and on microchemistry (A. A. Benedetti-Pichler), while for those with a taste for the more fundamental and theoretical sides of biochemistry H. A. Krebs has written on carbon dioxide assimilation in heterotrophic organisms, E. S. Johnston and J. E. Myers on photosynthesis, and F. Lipmann on biological oxidations and reductions. Other chapters are concerned with the primarily chemical aspects of steroids (H. Sobotka and E. Block), of proteins and amino-acids (L. F. Hewitt, R. A. Kekwick, and A. S. McFarlane), of sulphur compounds (J. C. Andrews), of carbohydrates (H. S. Isbell), of the lipids (S. J. Thannhauser and G. Schmidt), of hormones (H. Fraenkel-Conrat), of animal pigments (C. Rimington), and of viruses (C. L. Hoagland). Finally, to round off the picture, astonishingly complete for wartime, there are reviews of mineral nutrition (L. A. Maynard and J. K. Loosli) and of mineral nutrition of plants (D. I. Arnon). The book is as indispensable to research workers and teachers in or near the field of biochemistry as have been its predecessors in this excellent series.

Prof. McCollum in his foreword refers to *Vitamins and Hormones* as a new publication, as indeed he had to do when introducing a "Volume I." But those who know and possibly possess the two issues of *Ergebnisse der Vitamin- und Hormonforschung*, published by the Akademische Verlagsgesellschaft of Leipzig in 1938 and 1939, may reasonably regard this survey as more of a phoenix than a new creation. However that may be, the United States compares in every way favourably with its Swiss-German predecessor. Nothing, for example, could be better done than Prof. C. H. Best and Dr. C. C. Lucas's review on "Choline: Chemistry and Significance as a Dietary Factor"; in 60 pages, closely packed with information and discussion, they open up the allied problems of fatty livers and transmethyations, nor do they neglect to indicate emphatically where judgment must be suspended and more experiments made. Of somewhat slighter calibre, though of no less authority, is H. H. Mitchell's review of the relationships between vitamins and amino-acids. Wald's discussion of the part that carotenoids (including vitamin A) play in the photoreceptor system is perhaps the most controversial in the book; it comes from an expert with whom other experts in the field are not in whole-hearted agreement. R. J. Williams speculates interestingly on the distribution of vitamins in various tissues and organs, while Richard P. Hall discusses the more circumscribed subject of growth factors for protozoa. Norman Jolliffe and Rita M. Most contribute a discussion on the appraisal of nutritional states, practical and topical. The review of the physiology of anti-pernicious-anaemic