vaginam for two weeks. The relevant history was of admission for the investigation of an iron-deficiency anaemia 4 years previously. Examination at that time had shown no other cause for the anaemia than menorrhagia from uterine myomata and she was advised but refused operation. She denied that there had been any undue loss with her periods from that time until the present episode, and also denied having any abdominal pain.

On examination, the patient was febrile (temperature 39.5° C; 103° F), extremely pale and appeared toxic. There was smoothness of the tongue, kolonychia and there was a systolic murmur at the apex of the heart. The chest appeared normal. Examination of the abdomen showed there to be a mass arising out of the pelvis equivalent in height to a sixteen-week pregnancy. Vaginal examination revealed the upper vagina filled by a large, discoloured, necrotic mass, the cervix not being identified. A diagnosis of an infected extruded submucous myoma in association with long-standing anaemia was made.

Investigations: Blood group 'A'; Rh. +, Hb. 3.8 g./100 ml., WBC 15,000/cu. mm. (Neutrophils 91%). Chest X-ray normal. Blood culture negative.

Treatment: Slow blood transfusion was commenced, five pints being given over four days. There was a marked improvement in the clinical condition, the temperature fell to normal and the haemoglobin rose to 10 g./100 ml.

Operation was carried out 6 days after admission, examination under anaesthesia confirming the presence of a large, necrotic myoma in the upper vagina, the cervix being felt widely dilated around the upper part of the mass. In view of the age of the patient, total abdominal hysterectomy was carried out, the ovaries also being removed. Operation was uneventful and the patient was given two further pints of blood during the procedure. Tetracycline, 250 mg. 6-hourly, was given for the five days following operation. Her course was uneventful and she was discharged three weeks later. Follow-up at the out-patient clinic revealed her to be well and symptom-free. The haemoglobin was 12.8 g./100 ml. and she was discharged from the care of the hospital.

Histological report: The uterus contains a large fleshy myoma, 15 x 10 x 9 cm., which is arising by a broad base from the posterior wall of the uterus. The mass, the surface of which is blackened and necrotic, is lying partly within the cavity of the uterus and partly through the widely dilated cervix. Microscopically, there is marked oedema and leucocyte

infiltration and some vessels contain recent thrombi. There is no evidence of malignancy.

Comment

Despite the absence of abdominal pain, the patient had extruded this very large, degenerate, submucous myoma through the cervix. There was associated systemic upset and a gross degree of anaemia, although it was felt that the latter resulted from recent blood loss superimposed on long-standing anaemia from menorrhagia. Abdominal hysterectomy was here the treatment of choice in view of the age of the patient.

Discussion

The above three cases emphasise the severe symptoms which may result from submucous myomata of the uterus and justify the title of this paper. Although classically there will be pain, haemorrhage and pyrexia from infection and necrosis of the tumour, such symptoms need not occur together, as the cases illustrate. No generalisation can be made about treatment, for the patients may be of any age group and symptoms may follow pregnancy or abortion or may present independently of the latter and it would be sensible to treat each case on merit. After preliminary transfusion and measures to combat infection, operative removal will be undertaken, either by the vaginal or abdominal route and the uterus preserved, if there is a desire for further pregnancies, in the younger age group; otherwise it would seem reasonable to proceed to hysterectomy.

Summary

Three cases in which severe symptoms were associated with a submucous uterine myoma are described.

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THE SPLENIC FLEXURE SYNDROME

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THE SPLENIC-FLEXURE syndrome would appear to have received inadequate attention as judged by the paucity of reports in the literature and by its infrequent inclusion in textbooks of general medicine and even of disorders of the alimentary tract. Familiarity with the condition is important not only in elucidation of the nature of some

examples of upper abdominal pain, but also by reason of its simulation of pain of cardiac or pulmonary origin. Palmer, Deutsch and Scott (1955) were impressed by the common diagnostic error of coronary artery disease; in many instances the subjects had become cardiac invalids as a consequence of ill-directed medical advice. These

observers frankly conceded, in retrospect, their failure to recognise the numerous examples of the malady encountered prior to the description of the syndrome in 1952 by Machella, Dworker and Biel.

Case Report

The patient, a male of 33 years of age, an insurance broker by occupation, complained of attacks of left-sided pain over a period of five years. The onset of an attack was sudden, the initial site of pain being in the left upper abdominal quadrant or in the lowermost area of the left chest anteriorly. Thereafter extension occurred to the precordial area, and subsequently to the ulnar aspect of the left arm as far as the tips of the fingers. Each episode lasted several hours. During a bout he did not feel ill although the pain was moderately severe, and while there was a sensation of breathlessness, this he attributed to the aggravation of the pain produced by deep breathing. On an average an attack appeared once in three months. He was not able to associate its precipitation with exertion, dietary changes, emotional disturbance or other factors. A feature which was constant in each episode was a gurgling sound located in the left upper abdomen; it was sufficiently loud to be audible to his wife and it would persist in varying degree during the greater duration of the attack. The patient was a serious-minded individual, striving to improve his position, and painstaking and industrious in his work. He was meticulous in his dress, regular in his habits and somewhat obsessively concerned with detail.

No significant illness had been experienced in the past. *Physical examination* was unrevealing. X-rays of the chest and cervical spine, barium meal and barium enema showed no abnormalities. The blood WR was negative, the ESR stable, and the haemoglobin 13.4 g./100 ml. Three specimens of stool were negative for occult blood. The ECG was within the normal range.

Discussion

Pain is the presenting feature in the great majority of those affected with the splenic-flexure syndrome, the left epigastric zone being the most usual site of origin. Radiation to the precordial area, the left shoulder and the ulnar aspect of the left arm forms the most common pattern but there are variations so that both shoulders, both arms, the neck and jaw and the posterior aspect of the thorax may be involved in various combinations. On occasion the pain may not occur at all in the abdomen and be confined to one or more of these sites of reference. The hepatic-flexure syndrome refers to a similar clinical picture, but here the right epigastrium is the primary locus, the term implying an origin in the hepatic region of the colon. The description of the pain generally is that of a sensation of pressure or fullness, infrequently is it of clamant severity. Often a desire to eructate wind or to expel flatus accompanies the pain. A sensation of breathlessness and palpitations may be coincident. The pain may persist only for minutes, although much more frequently it endures for hours. It is uninfluenced by the recumbent position, but relief may be afforded by expelling wind or faeces, either spontaneously or

following an enema. The patient may be able to appreciate emotional stress or constipation as the precipitating factor but not infrequently he is quite unable to incriminate any causal agency.

During an attack physical examination may reveal an increase of the area of tympanic percussion over the left lower chest which may extend even as high as the 5th interspace. This area coincides with a radiological finding of an accumulation of gas in the splenic flexure displacing the diaphragm in an upward direction. Radiological examination between attacks will often demonstrate a reduction in this gaseous accumulation, but only by correlation with the symptomatology can these radiological appearances be considered of diagnostic value.

Barium contrast studies yield negative findings. While Machella, Dworker and Biel (1952) were originally impressed by the acuteness of the angle formed by the junction of the transverse and descending portions of the colon, this feature is of no real significance, a similar incidence being observed in a control series. Borborygmi often audible to those in the immediate vicinity afford a valuable diagnostic pointer. No sex predilection exists, and the condition makes its first impression in adult life. Attacks occur at irregular intervals with absence of symptoms in the intervening periods.

The gaseous content of the intestine is a composite of that swallowed and that generated by the intestinal organisms; within the colon the gas is collected in spherical bubbles through haustral activity, and should it prove a distending force pain is produced, the degree of which is an index of the response of muscle tone rather than of the quantity of the distending gas (Palmer, 1963). Painter (1963) points out that segmentation can convert the colon into a series of segments or "bladders" and should the outflow tract be obstructed a high localised pressure will develop. In order to achieve a rise of intra-luminal pressure, contraction of the bowel wall must be accompanied by resistance to escape of the contents of the segment (Kirsner and Palmer, 1958). Obstruction to forward movement of the contents of the splenic flexure would similarly permit the development of localised high pressure at this site. The pain of the splenic-flexure syndrome was analysed by Machall, Dworker and Biel (1952) as due to spasm of the descending colon producing the obstructive mechanism in association with increased motor activity of the proximal colon acting as a potent propulsive force. Kirsner and Palmer, (1958) similarly postulate an acute local distension at the splenic flexure resulting from uncoordinated motor activity of the colon. The site and supra-diaphragmatic reference of the pain coincide with that produced experimentally by inflation of the splenic flexure by means of an introduced air balloon (Keen, Almy and Stolk, 1951).

The splenic-flexure syndrome forms one of the

clinical manifestations of the irritable colon syndrome. Kirsner and Palmer (1958) viewed the disorder of colonic function as a reflection of an imbalance of the autonomic nervous system, on a psychogenic basis. Emotional stress may be attended by contraction of the longitudinal and circular muscle of the gut (Grace, Wolf and Wolff, 1941). Manometric studies have demonstrated altered colonic activity in states of emotional conflict; excessive motor activity was evoked by aggressive or hostile sensations whereas reduced activity was evident in depressive reactions (Almy, Abbott and Hinkle, 1950). An exaggerated colonic response follows an injection of prostigmine in patients with the irritable colon syndrome even in the symptom-free phase, possible indicative of a state of parasympathetic over-activity as an accompaniment of emotional stress (Chaudry and Truelove, 1961).

The psychological factors participating in the genesis of the irritable bowel syndrome were analysed by Chaudhary and Truelove (1961). In women, more frequently involved than men, the psychological stress was principally related to their families, whereas in men it was largely related to their careers. A distinctive personality pattern in the splenic-flexure syndrome has been suggested by Palmer (1963) distinguishable from other forms of the irritable colon syndrome and resembling that encountered in peptic ulcer subjects. He observed excessive self-confidence, hostility and general tension without overt nervousness; often there was a degree of cynicism with resentment of the medical explanation of the symptomatology. The diagnostic difficulties were manifested in the range of diagnoses proffered by the referring practitioners, and in the number of investigations which had been conducted. There was a considerable incidence also of negative exploratory laparotomies. The simulation of cardiac disease is of great significance to which reference has already been made. As Fishberg (1954) indicates, while there is a decreasing tendency to mistake cardiac disease for indigestion, there is a growing tendency to err in the opposite direction.

Treatment is directed largely to the reassurance of the patient of the absence of serious organic disease. Psychotherapeutic measures may be neces-

sary in the individual case. Antispasmodics, sedatives and antidepressants have yielded somewhat varied but generally disappointing results. Asaf-oetida, prescribed in a dose of 0.3 g. with each meal, was found successful in 50% of cases by Palmer, Deutsch and Scott (1955) although they were unable to offer a satisfactory pharmacological explanation for this response.

Summary

The clinical features of the splenic flexure syndrome are described and the underlying causative mechanism discussed. The importance of distinguishing it from cardiac and other forms of abdominal disease and its benign nature are stressed.

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FAMILIAL INCIDENCE OF DIFFUSE INTERSTITIAL PULMONARY FIBROSIS

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FIRST described by Hamman and Rich (1944) as an acute progressive condition, diffuse interstitial pulmonary fibrosis is now considered to be more commonly a chronic disease.

The clinical, radiographic, physiological and

histological features are fully appreciated by physicians interested in chest disease, and increasing numbers of cases are being diagnosed.

In a recent description of the largest series of cases so far published in this country, Livingstone