was possible to compare the sex incidence with 50 male and 50 female cases. As in previous surveys (Hegarty, 1956; Leatherdale *et al.*, 1959) female patients showed a higher incidence of symptoms.

Character and Duration of Stiffness

The character of the stiffness was not influenced by the relaxant used. The distribution was as follows: neck 59%; abdomen, 33%; chest, 31%; back, 10%; shoulders, 9%.

The onset was normally 12–24 hours after the operation, and only two patients developed symptoms later than 24 hours post-operatively.

In one-third of the patients the pain or stiffness had already recovered by the time they were due for discharge from hospital. In the others it lasted an average of one and a half days after discharge or four days in all. In only three patients did it persist for longer than five days after operation.

On completion of the cases analysed above, recording was continued on a control series, using gallamine as the relaxant for intubation. A further 25 cases were observed and only one case of mild transient stiffness was recorded.

Discussion

Foldes *et al.* (1956) showed that the duration of apnoea after 1.2 mg. of suxethonium per kg. body weight was shorter than that after 0.6 mg. of suxamethonium per kg. In our experience, even a dose of 180 mg. of suxethonium sometimes failed to give a satisfactory relaxation for intubation as 50 mg. of suxamethonium. With this dosage, the difference appeared to be in the intensity rather than duration of the paralysis.

The article by Enderby (1959) appears at first sight to contradict our results. He found a marked reduction of incidence and severity of stiffness after the use of suxethonium. However, the conditions in his series are not comparable to ours in that he used a small dose of suxethonium (50 mg. in his main series) to potentiate the action of decamethonium in patients requiring a hypotensive anaesthetic technique. A comparison of his results with our own suggests that the incidence and severity of stiffness may vary with the dose of relaxant.

Although there is the ever-present danger of a mixed block, a small dose of curare or gallamine given before suxamethonium reduces the incidence of stiffness (Churchill-Davidson, 1954; Morris and Dunn, 1957). These drugs antagonize the action of suxamethonium (Foldes *et al.*, 1957), probably by a competitive blocking action, so that they, too, may reduce post-operative stiffness by lowering the effective dose of depolarizing relaxant acting at the neuromuscular end-plate.

In our series we have endeavoured to include all forms of stiffness, and the symptoms recorded varied greatly from transient myalgia to true pains lasting five days. The incidence reported will depend upon the criteria used in assessment, and this may explain the varied results reported in previous series, representative figures being 36.4% (Leatherdale *et al.*, 1959), 72% (Morris and Dunn, 1957), 25.6% (Hegarty, 1956), 66.7% (Foldes *et al.*, 1956), 0% (Ruddell, 1957). Very rarely did any patient complain of symptoms directly to us, and we believe they were generally regarded by the patient as the usual "aches and pains" expected after an

operation. This factor may elucidate the apparent absence of this complaint in the experience of some anaesthetists, especially after a major abdominal surgical procedure, when the patient may be suffering considerable pain from the site of the operation.

Summary

Suxamethonium chloride was compared with suxethonium bromide in a series of patients undergoing dental operations.

No significant difference in the incidence or character of the post-operative pain or stiffness was recorded.

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Medical Memoranda

Intraperitoneal Haemorrhage from a Vessel on the Surface of a Uterine Fibroid

Intraperitoneal haemorrhage from a vessel on the surface of a uterine fibroid is a rare complication. Barely 60 cases have been recorded in English literature.

The condition is of importance to the general surgeon as well as to the gynaecologist because the onset is sudden, producing acute abdominal symptoms, which may sometimes be referred to the epigastrium. The recorded pre-operative diagnoses have varied from ruptured ectopic gestation, haemorrhage from an ovarian cyst, twisted ovarian cyst, acute appendicitis, perforated gastric ulcer, intestinal obstruction, acute pancreatitis or ruptured spleen, to torsion of a pedunculated uterine fibroid. Very seldom has the diagnosis been made before laparotomy.

CASE REPORT

A married woman aged 33 experienced sudden severe lower-abdominal pain while sitting watching television. The pain became generalized and was very severe for three-quarters of an hour, but then was less severe unless she moved. Faintness and nausea developed, but no vomiting, shoulder pain, or diarrhoea.

Her last menstrual period had started six days earlier and was normal in amount, lasting four days. She had a regular 28-day cycle and did not think that she was pregnant. She was a para-1, with one miscarriage, and gave a history of occasional attacks of abdominal pain and vomiting for a few months before admission, but of no other illnesses.

On admission to hospital, four hours after the onset of pain, she was very pale and kept feeling faint; temperature 97° F. (36.1° C.), pulse 92, and blood-pressure 95/60 mm.

Hg. There was no secretion in the breasts. The abdomen was slightly distended below the umbilicus but no mass was palpable. Tenderness and resistance were present in the lower abdomen, and it was not dull to percussion. On vaginal examination the cervix was slightly softened, but the body of the uterus was not clearly defined because of the abdominal resistance. An extremely tender indefinite mass was felt in the right fornix and she was very tender in the pouch of Douglas and experienced pain on movement of the cervix.

A provisional diagnosis of ruptured ectopic gestation or haemorrhage from a follicular or endometriotic cyst of the right ovary was made.

Blood was taken for cross-matching, and an intravenous drip of 1 pint (568 ml.) of dextran was started, followed by 3 pints (1,704 ml.) of blood.

At laparotomy about 1½ pints (852 ml.) of fluid blood and clots were removed from the peritoneal cavity. Both tubes and ovaries were normal. The uterus was enlarged by a subserous uterine fibroid about 2 by 2½ in. (5 by 6.2 cm.), situated on the right side of the anterior surface of the uterus just below the right cornu. On the surface of the fibroid were several thin-walled veins, one of which had ruptured and was bleeding freely. There were no adhesions around the uterus.

Myomectomy was performed and the uterine wall closed. The fibroid was very superficial in the uterine wall, and the resulting scar was only about 1 in. (2.5 cm.) long.

The patient had a post-operative respiratory infection, but otherwise made an uneventful recovery.

The pathologist reported a fibromyoma measuring 6 by 5 cm., containing haemorrhages. Microscopical examination revealed areas of oedema and thrombosis.

COMMENT

The cause of haemorrhage from a vein on the surface of a fibroid is not known, but Hasskarl (1949), in a review of the literature on 50 cases, states that most have followed a blow on the abdomen, a fall, or heavy work. His patient had been gardening and was menstruating when the pain started. McNeil (1952) was also of the opinion that sudden exertion might precipitate haemorrhage, especially during menstruation, when congestion might be present. His patient was menstruating and she had been hanging pictures when bleeding started. The fibroid was situated posteriorly, and had adhesions. Davies (1950) records two cases in which patients were sitting quietly at the time of intraperitoneal haemorrhage, though they were menstruating.

It seems to be more common for haemorrhage to occur when the fibroid is situated on the posterior wall of the uterus, for three of the above cases were thus situated, and so also was one of the two recorded by Shelfo (1939) and in each of those recorded by Schneider and Jemerin (1942), Woodruff (1948), and Sheehan (1951). However, fundal fibroids were present in Shelfo's other case and in those described by Bosch, Carter, and O'Grady (1950) and by Kaye and Ficarra (1950). One large fibroid on the anterior wall up to the umbilicus was reported by Li and Braden (1952); the woman was travelling by bus when her haemorrhage started. The case recorded here, however, had only a small fibroid situated on the anterior wall of the uterus, with no adhesions, and she was at rest and was not menstruating, so no precipitating factor seemed to be present, leaving the aetiology obscure. The age of the patients varied from 24 years (Goldstine, 1921) to 52 years (Shelfo, 1939).

In most recorded cases treatment has been by some type of hysterectomy, though simple ligation of the

bleeding vessel was reported in one case in Hasskarl's review. He recorded treatment by myomectomy in 12 cases, and to these may now be added Sheehan's case and the present one. Myomectomy seems the only justifiable treatment in young patients, particularly when few fibroids are present and they are readily accessible. Blood transfusion is, of course, required in the majority of patients, as haemorrhage is severe.

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Hypertrophic Osteoarthropathy Associated with Carcinoma of Stomach

The subject of hypertrophic osteoarthropathy was first brought to the attention of the medical world by Bamberger (1889) and Marie (1890). Suppurative pulmonary conditions such as bronchiectasis, empyema, lung abscess, and tuberculosis were regarded as the chief aetiological factors, but now, with the changing pattern of pulmonary diseases, bronchogenic carcinoma is gradually emerging as the principal primary disease responsible for arthropathy (Semple and McCluskie, 1955; Shapiro, 1956). Besides pulmonary and pleural diseases, hypertrophic arthropathy has been described, rarely, in congenital heart diseases, chronic gastro-intestinal diseases such as the sprue syndrome and ulcerative colitis, hepatic cirrhosis, and carcinoma of the nasopharynx. It is extremely rare to have osteoarthropathy associated with cancer of the oesophagus, and one such case has been described in which the malignant tumour developed as a complication of achalasia and was associated with marked features of hypertrophic osteoarthropathy due to pleural extension of the growth (Peyman, 1959). So far as we are aware, hypertrophic osteoarthropathy has not been described associated with carcinoma of stomach, and therefore the following case merits description.

CASE REPORT

A married labourer aged 46 was admitted to hospital in June, 1959, with the complaint of gradually progressive difficulty in swallowing, first with solids and later with fluids. He had lost a great deal of weight and was becoming progressively weak. There was no history of haematemesis. He also complained of a vague ill-defined pain in the lower chest on both sides. He was conscious of the fact that his wrists and ankles had greatly thickened during the previous six months and the finger-ends had become peculiar. His attention was directed to these changes by a constant dull ache in the wrist- and ankle-joints.

On examination he looked pale and ill-nourished. The face had an acromegaloid appearance with a large, shiny,