ANNOTATIONS

Aspiration of Stomach Contents during Anaesthesia

Three articles recently published1, 2, 3 have drawn attention to the grave dangers resulting from aspiration of gastric contents during anaesthesia. Proof of such aspiration was obtained in 16 per cent. of 300 cases, 2 so that it is by no means a rare accident. It may follow frank vomiting, which is usually obvious and audible to the anaesthetist, but as frequently it results from silent regurgitation which may not be noticed until the mask is removed from the patient's face at the end of the operation. Certain positions predispose to it, especially the lateral and the Trendelenburg. Several techniques favour it, especially deep general anaesthesia and muscle relaxants which render the oesophageal sphincters atonic. It is especially common during operations in which the stomach is handled, and in all those conditions which contribute to delayed emptying or abnormal filling from below of the stomach or oesophagus. Emotional states such as pain, anxiety and fear, and grave illness are all causes of delayed emptying. It is dangerously common in labour² and is one of the chief reasons why regional methods of analgesia should be used whenever possible in obstetric cases who are not properly prepared for operation.

Aspiration may take place under anaesthesia during induction, maintenance or recovery. If all patients were returned to bed in the semi-prone tonsil position and so left until conscious, the danger during recovery would be materially reduced.

A gastric tube if properly placed and used will reduce the incidence of aspiration, but it must be emphasized that a Ryle's tube can only drain thin fluid, so that an oesophageal tube slightly fatter than a lead pencil should be gently but firmly coaxed into every patient in whom there is a suspicion that the stomach may not be empty. It should be left in position until the larynx is protected either by the insertion and inflation of a cuffed endotracheal tube, or by the return of the cough reflex.

If food is known to be present no general anaesthetic must be given until five hours have elapsed, while in all acute abdominal conditions, including intestinal obstruction, strangulated hernia, peritonitis from any cause, burst abdomen and in most cases of accident requiring deep anaesthesia, the stomach should be assumed to be full. An oesophageal tube should therefore be inserted before induction of anaesthesia. As Morton and Wylie¹ point out, cases of acute appendicitis do not usually vomit or regurgitate during anaesthesia.

Aspiration of stomach contents into the lungs can cause respiratory obstruction and death from asphyxia or from laryngeal spasm. It can, especially if much gastric acid is aspirated, cause in two or three hours a syndrome characterized by bronchospasm, fever and cough simulating acute pulmonary oedema, which may not clear up completely for two or three weeks, with radiological appearances of patchy basal congestion. Finally, aspiration bronchopneumonia may follow, and the patient then runs the risk of sequelae such as atelectasis, pneumonitis, bronchiectasis or lung abscess. The right lung, especially the apical area of its lower lobe is soiled more frequently than the left lung because of the anatomical arrangement of the bronchi.

All those orderlies, nurses, residents, surgeons and anaesthetists, therefore, who are concerned in the management of surgical patients must become more ‘aspiration conscious,’ and that which cannot be accomplished by intelligent prevention must be guarded against by constant watchfulness.

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REFERENCES
1. MORTON, H. J. V., and WYLIE, W. D. (1951), Anaesthesia, 6, 6, October.

Mepacrine and Lupus Erythematosus

A chance observation led Page to use mepacrine in a case of chronic discoid lupus erythematosus who had been treated by the usual methods for two years without any significant change. There was a dramatic improvement, with complete disappearance of slight lesions and a great improvement in extensive lesions. Eighteen cases have been treated, and only one has failed to improve. Nine were reported as showing excellent, seven as good and three as slight improvement. One case of acute disseminated lupus erythematosus showed rapid improvement, and in a chronic case with rheumatoid arthritis, the joints became normal in four months, although the improvement in the skin lesions was only slight. Page finds that the degree of improvement seems to be related to the degree of skin staining produced by the drug. He gives 300 mg. daily until the skin is stained, and then 100 mg. daily as a maintenance dose. The duration of treatment has varied between six weeks and three months. Toxic effects have not been troublesome, but mild reactions are not an indication for discontinuing treatment.
It is suggested that mepacrine may act by reducing light sensitivity of the skin, by an action like ACTH or cortisone, or by antagonizing adenyl compounds which are found in the lesions of lupus erythematosus.

These results are encouraging. Whether mepacrine cures the disease or controls the lesions has yet to be decided.

K.P.

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Treatment of Abscesses

Recent work in Leeds suggests that the granulation tissue surrounding an abscess, in addition to preventing the spread of infection from the abscess, also prevents penicillin and other antibiotics getting into the abscess to overcome the infection. Once an abscess has formed therefore, it is of little use giving penicillin or other antibiotic. If, however, when the abscess is incised, the granulation tissue barrier is broken down by curettage gently, any penicillin in the blood can enter the abscess and overcome the infection.

It is now our practice to give a large dose of penicillin (600,000 units procaine penicillin mixed with 250,000 units aqueous, the most painless method), to wait half an hour and then carry out the incision. All pus is evacuated and the lining of the cavity curetted. It is then our aim to carry out primary suture of the wound. With hand infections, if the incision is made in a skin crease, suturing is not always necessary. With abscesses of the breast, axilla, face, neck and elsewhere, the skin edges are firmly opposed. In ischio-rectal abscesses, sulphonamides or streptomycin are used in conjunction with penicillin. One more injection of the antibiotic is given on the second day, and the wound is inspected on the fourth day. Unless the organism is insensitive to penicillin, which is rarer than one might think, we expect the wound to be healed or almost healed. The most dramatic results have been achieved in ischio-rectal abscesses, where a long series have returned to work in six or seven days, instead of being in hospital for several weeks. A further extension of this principle is that it is unnecessary to wait for an abscess to 'point'. Penicillin can deal with any contamination from a deep abscess. If the skin is devitalized by leaving the abscess to point, the stitches tend to cut out and the wound may gape.

It has thus been shown that the age-old method of treating an abscess by waiting for it to point, incising and leaving it to drain is now out of date. The modern method is to operate with a large amount of penicillin in the circulation, allow the penicillin to get into the abscess by breaking down the granulation tissue barrier, evacuate the pus, sew up the wound and leave the penicillin to do its work.

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