The following table shows the nature of the cases which were selected as suitable :

Cases in the Series

Hernia (inguinal and femoral) ..	31	Hydrocele ..	2
Orthopaedic ..	19	Nephrolithotomy ..	1
Mastectomy (simple and radical) ..	12	Cystotomy ..	1
Varicose veins ..	10	Gynaecological; abdominal (hysterectomy, ovarian cyst, etc.) ..	27
Cystoscopy ..	3	Vaginal hysterectomy ..	1
Prostatectomy (Millin's) ..	2	Vaginal repair ..	13
Appendicectomy ..	10	Dilatation and curettage ..	7
Haemorrhoidectomy ..	3	Laparotomy ..	1
Colostomy ..	4		
Gastrectomy ..	1		
Circumcision (adult) ..	2		

A start was made with minor extra-abdominal cases, and gradually the scope was widened as more experience and confidence were gained. The method has now been adopted as almost routine except for the more difficult upper abdominal cases, such as gastrectomy. One gastrectomy is quoted here, but was not a complete success owing to the mistiming of a further dose of flaxedil, which led to the peritoneum being insufficiently relaxed for easy suture.

GENERAL OBSERVATIONS

Patients seldom suffer any side-effects from the use of pethidine. In a few cases there has been a marked reduction in the frequency, although not in the volume, of respiration. In two cases the respiration was reduced to seven a minute, and in one case to three. Adequate ventilation was easily obtained by "assisted respiration."

It is sometimes a little difficult to maintain adequate oxygenation combined with sufficient depth of anaesthesia during the earlier stages of the operation, but this is overcome by waiting a few minutes, allowing time for the patient to become stabilized on nitrous oxide, and giving an increased percentage of oxygen.

No significant alterations of blood pressure have been recorded as due to pethidine.

One outstanding feature is that apparently the sphincter ani becomes sufficiently insensitized to allow of such operations as haemorrhoidectomy and posterior colporrhaphy to be done without alteration in the patients' respiration and without any evidence of distress.

It is a little difficult to judge at what interval of time pethidine begins to exert its maximum effect, but probably this varies between five and ten minutes, as judged by the incidence of reflex movements when under the anaesthetic. It is possible that the more prolonged administration of nitrous oxide affects this estimate. It has not been found necessary to repeat the dosage of 25 mg. of pethidine at intervals of 25 to 30 minutes, and the effect of a single dose has been known to last up to 1½ hours.

Recovery is rapid, often occurring in the theatre, and almost always on the way back to the ward. Patients will almost immediately open their eyes upon request and will answer questions, but there is a varying period of amnesia lasting up to 1-1½ hours.

Another valuable point is that post-operative pain seems to be considerably reduced, and patients operated upon in the morning often do not require any post-operative sedative until late in the evening.

The present series is not large enough for the incidence of pulmonary complications to be judged accurately, but they have been remarkably few, and it is felt that this may largely be due to the reduction of immediate post-operative pain and the consequently increased movements of the patients.

The series reported is small, and further investigation is proceeding, but it was felt justified to publish results up to date in order to stimulate interest in a method which

appears to be safe and also promises improvingly good results as more experience is gained in its use.

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REFERENCE

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Post-pneumonic Collapse of Right Lower Lobe Relieved by Bronchoscopic Aspiration

Atelectasis of the whole lung or of one lobe, whether post-operative or post-pneumonic, is considered to be due to bronchial obstruction. The sequence of events in either case is very much the same : (1) Production of excessive secretion. (2) Formation of occluding masses because of the recumbent position and reduced respiration through splinting of diaphragm and pain. (3) Movement of these masses upwards in the tract by ciliary action, somewhat on the principle of a ball-valve, allowing air to get out during expiration but preventing air getting in during inspiration. The shape of the bronchus being narrower in its distal portion than proximally explains how a plug of mucus can act in that manner. (4) Progressive shrinkage of the affected lobe takes place (aided by absorption of air into the blood stream) as the plug of mucus becomes immobilized by atmospheric pressure.

Whereas *post-operative* collapse and relief by bronchoscopic aspiration has been extensively reported, I could find mention of only two cases of *post-pneumonic* collapse relieved in this way (Mainzer, 1931). I therefore venture to report the following case.

CASE REPORT

A married woman was admitted to the French Hospital on February 24, 1949, with a 10-day history of post-influenzal cough. Her temperature was 103° F. (39.4° C.) and pulse 120.

Physical examination showed dullness at the base of the right lung, which was opaque on x-ray examination. A diagnosis of lobar pneumonia with small pleural effusion was made by Dr. L. P. E. Laurent. Penicillin injections in full doses were given. The patient became afebrile and improved generally, but the dullness on the right side remained. X-ray examination four weeks after admission revealed a solid lower lobe with the diaphragm drawn upwards and the heart pulled to the right. The physician and the radiologist now began to suspect a neoplasm blocking the inferior bronchus.

The patient was referred to me, and bronchoscopy was carried out on March 29. The right main bronchus appeared congested, the entrance to the inferior bronchus was patent, and no neoplasm was seen. A bronchoscopic sucker was then introduced about an inch beyond the entrance to the lower lobe. While aspirating and withdrawing the sucker at the same time, a thick gelatinous, tenacious mucous plug was seen adhering to the distal end of the sucker. The patient's relief was almost immediate.

Within a few days physical examination showed some return of pulmonary function. Successive radiographs revealed the lobe expanding gradually, the diaphragm descending, and the heart resuming its normal position. Tomograms confirmed the absence of a neoplasm. The patient left hospital on May 2, having made a complete recovery.

ARTHUR MILLER, F.R.C.S.Ed.

REFERENCE

Mainzer, F. S. (1931). *Amer. J. Surg.*, 12, 430.