comfortable if the hole points downwards. The distance from the exterior to the nasopharynx is about three inches. The catheter can be conveniently fixed to the cheek by a piece of sticking-plaster. Prolonged personal use shows that passing the gas through warmed water lessens the discomfort; it also has the advantage of making the flow of gas visible. A flow meter is convenient, but not essential. The flow should be as fast as the patient will readily tolerate. A reducing valve or some sort of fine adjustment is most desirable, but in any case the catheter should be disconnected during any manipulation of the taps. Care should be taken to keep the tube leading to the patient free from water.

A New Modification.

As might be expected from the superiority of the face-mask over the catheter in raising the alveolar oxygen, it has also been observed clinically that the former method may remove entirely a cyanosis which the latter had only been able to lessen. Consideration of this, and of the drawbacks of the face-mask mentioned above, has led to the trial of a mouth-mask which allows the patient to breathe oxygen by the mouth while leaving the nose free to breathe air. It appears to be more comfortable and more willingly borne by the patient. The front is covered by a large flap of thin rubber, which gives a minimal resistance to expiration. The tube connecting the oxygen bag comes in underneath. The mouthpiece is provided with an inflated rubber cushion to make it fit comfortably; it is held in place by a piece of elastic which passes behind the head. Oxygen is breathed from a bag in which the gas collects during expiration, as described by Haldane. Gilchrist and Davies⁸ have described a modification of this principle, which is simple to make and highly efficient in use.* Chart 2 shows the effect on the alveolar oxygen; the highest figures are obtained if the nostrils are lightly plugged with cotton-wool. By this means in another subject the average alveolar oxygen was 650 mm.; but it is not considered advisable to maintain such high pressures indefinitely, since there is experimental evidence that pure oxygen for three days causes pulmonary oedema in certain animals.^{12, 13} Further work is in progress on the clinical use of this apparatus and the effect it has on the oxygen in the arterial blood.

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INTUSSUSCEPTION IN AN ADULT DUE TO A POLYP OF MECKEL'S DIVERTICULUM.

BY

IAN MACDONALD, M.D.,
HUELVA, SPAIN.

A CRITICAL study¹ of intussusception in the adult shows that in 36 per cent. of the cases an intestinal tumour is the predisposing cause. The tumours in order of frequency are: simple polyps, lipomata, fibromyomata, and adenomata; malignant growths rarely occur in this type of intestinal obstruction. In the following case the intussusception was caused by a pediculated polyp which arose from a Meckel's diverticulum.

A man, aged 40, who had previously enjoyed excellent health, complained of slight discomfort round the navel and in the right iliac fossa. He, however, continued to eat, work, and live his ordinary daily life, and his bowels at this time acted normally.

* Both this and the mouth-mask are obtainable from Siebe Gorman, Westminster Bridge Road.

Four days later, after his evening meal, he was attacked by severe abdominal pain, accompanied by vomiting, which had continued, in spite of all treatment, for ten days, when he was admitted to hospital. The vomited matter had been first food, then bile, and latterly it had developed a faecal odour. During these ten days the bowels, in spite of purges and enemata, were absolutely constipated. On admission the vomiting had ceased for twelve hours, but the pain continued, the pulse was 80, and the abdomen was distended, but not tense. Peristaltic waves were clearly visible, running transversely in the "ladder pattern." The hernial sites and the rectum were negative and no tumour could be felt in the abdomen.

About six hours after admission the abdomen was opened mesially below the navel, under morphine, intravenous somnifene, and intermittent ether anaesthesia. Coils of very dilated small bowel bulged into the wound, while the caecum was brought out with a little difficulty. To its inner side twisted coils of small intestine could only be partly unravelled, and further examination revealed a hard mass in the interior of the caecum. It now became obvious that an ileo-caecal intussusception had occurred, so the intracaecal mass was gently pushed out through the ileo-caecal valve and the intussusception rapidly reduced. On continuing to push the tumour further along towards more healthy bowel it was suddenly arrested about two feet from the caecum, its pedicle of attachment arising from the inner aspect of a broadish Meckel's diverticulum about the size of the last joint of the thumb. The diverticulum was of a blackish-purple hue; the proximal ileum was intensely congested and much distended, while the distal portion was narrowed.

Resection of the parts was decided on, so the bowel was divided fully six inches proximal, and about three inches distal, to the pedicle of the tumour. After careful haemostasis of the sudden mesentery the intestinal ends were rapidly closed by a purse-string suture over a Parker-Moynihan clamp, and lateral anastomosis was performed. Finally an enterostomy was performed about eight inches proximal to the anastomosis on the dilated loop, a small tube being rapidly fixed in the bowel by a couple of purse-string sutures. The intestine was then fixed by a single catgut stitch to the peritoneum of the wound; the abdomen was closed and the patient put back to bed in good condition. He slept tranquilly all night; the pulse never exceeded 100, and there was no vomiting. The ileostomy tube drained very freely for forty-eight hours, and the bowels moved naturally on the third day; the tube became loose on the fifth day, and the patient left the clinic a month after his operation, with the wound soundly healed.

In this case, since the intussusception was reducible, the question arises whether excision of the diverticulum, extraction of the polyp, and transverse suture of the bowel might not have sufficed. A table of statistics, however, in Gueulette's thesis² shows that in 104 cases resection was performed 60 times with 41 recoveries. In intestinal obstruction after the obstacle is removed experience leads to the belief that enterostomy on the distended proximal loop is an important factor in the successful issue.

The specimen, placed by Professor D. P. D. Wilkie in the museum of the surgical department, Edinburgh University, is a thick polyp about three inches long, springing from the inner surface of a flattish Meckel's diverticulum. Histological examination showed that the intestinal polyp consisted of fibrous tissue into which haemorrhage had taken place. There was no evidence of malignancy.

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BLASTOMYCOSIS OF EYE AND FACE SECONDARY TO LUNG INFECTION.

BY

ARNOLD S. FERGUSON, F.R.C.S.Ed.,

AURAL AND OPHTHALMIC SURGEON, JERSEY GENERAL HOSPITAL.

FUNGUS involvement of the lungs, according to the statistics of Colonel Marett, medical officer of health and States bacteriologist, is of frequent occurrence in Jersey. The following case is of great interest, as the eye and face conditions are definitely secondary to the lung infection.

A man, aged 58, was sent to me by Dr. Sydney Whitaker. The patient was very evidently ill and emaciated. There was slight sclero-keratitis with accompanying ciliary injection of the left eye. Within a week the limbal conjunctiva and episcleral tissue showed

a raised violaceous thickening, and a ring of large granulomata formed a corona around the cornea. At the same time a large beefy-looking growth appeared on the right cheek. This was excised by a consulting surgeon, but by the time the stitches were ready for removal there was a recurrence spreading up to the right lower lid, and another growth appeared on the nose, over the left ala and tip.

I made a tentative diagnosis of tubercle, in spite of the rapidity of invasion, and the report of a well-known pathologist to whom a section of the growth had been sent seemed to confirm this.

FIG. 1.—Case of blastomycosis. Nose infection.

FIG. 2.—Blastomycosis. Right cheek infection.

The eye condition began to look desperate, and I saw the patient with Colonel Marett, who suggested examination of the sputum; he reported blastomycosis, and recommended a method of treatment which was carried out by Dr. Whitaker with the most happy result. The granulomata and ugly violaceous thickening have disappeared from the eye, the growths on cheek and nose have also vanished, and the patient has increased 9 lb. in weight in five weeks.

In view of the interest of this case, seeing that, apart from his grave general appearance, treatment of his eye for tubercle would have been hopeless, and that the other eye was being menaced by the rapidly advancing growth on his right cheek, I have appended Colonel Marett's notes.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TWO CASES OF MULTIPLE URETHRAL CALCULI.

I.

THE following case, in which retention of urine was caused by the presence of a very large number of urethral calculi, seems to be worthy of record.

A Chinese coolie, aged 45, was admitted to the Ipoh District Hospital, Federated Malay States, suffering from retention of urine. He had previously had no trouble in passing urine, and there was no history of venereal disease. On physical examination a large hard smooth mass was easily palpable in the penile urethra anterior to the scrotum. Further back a large sac was found, which proved to be the enormously dilated urethra; when handled it rattled, and a very great number of stones could be felt.

An incision was made over the most anterior and largest stone, and the urethra was opened. No fewer than 120 phosphatic calculi were then extracted with a slender curved forceps. A sound was passed into the bladder, but no further stones were found. The urethral incision was closed and the patient made an uneventful recovery. Cystoscopic examination at the end of convalescence demonstrated a perfectly normal bladder free from stones.

Perak, Federated Malay States.

C. B. PASLEY, F.R.C.S.I.

II.

THE case recorded below, in which close on a hundred stones were removed from the urethra of the patient, presents several interesting features.

A Chinese boy, aged 9, was brought to the hospital of the Shantung Christian University with a history of painful and difficult micturition for three years. The child looked ill, and was badly nourished.

A large stony-hard lump was felt in the posterior part of the penile urethra. On making a rectal examination what appeared to be another hard, rounded mass could be felt in the position of the bladder. It was not possible to pass a catheter, since on entering the urethra it almost immediately impinged on the mass mentioned, and it was quite evident that this was a stone impacted in the posterior urethra. A diagnosis of stone in the bladder with another in the urethra was made. The bladder was distended up to the umbilicus, and the kidney function was very poor, as shown by the urea concentration test.

In order to improve the child's condition with a view to operation he was given syrup freely by the mouth and 20 grains of sodium bicarbonate in water every two hours for one day. In the

NOTES BY COLONEL MARETT.

The patient was brought to see me by Mr. Ferguson. The condition as seen then (April 19th) showed infection of left eye, nose, and right cheek. On inquiry he was found to be suffering from cough, with sputum, and loss of weight. A section of the growth from the cheek had been examined by a pathologist. There was rapid recurrence after removal. Examination of the sputum showed the infection to be monilia, and the method of infection of the skin was undoubtedly due to the use of handkerchiefs infected from sputum.

The treatment recommended was increasing doses of potassium iodide up to 30 grains thrice daily, and weekly increasing doses of monilia vaccine, the parts to be painted with a solution of 0.5 per cent. each of brilliant green and crystal violet to combat sepsis, and the patient advised to use paper handkerchiefs. It is interesting to note that the report of a section stated that the condition was due to tubercle. Skin infection with monilia is known, and is less frequent than moniliasis of lungs, no case of double infection of lung and skin having been recorded according to the literature available, but owing to the fact that monilia skin infections are usually on the face, it is quite possible that these infections may be secondary to a lung infection. In Jersey the frequency of monilia of the lung is as common as tuberculosis of the lungs, and most of these latter suffer from the double infection. *In vitro* it has been found that there is a symbiotic action between tubercle and monilia. Tubercle grows readily in an alkaline medium, whilst monilia require an acid medium. All cases of true double infection do best by having monilia treated first, and then proceeding with tubercle vaccine. It must be understood that it was solely a monilia infection in this case, and at the time of making the diagnosis a good prognosis was given.

evening he was given 33 oz. (1,000 c.cm.) of a 5 per cent. glucose solution per rectum and a similar dose the following morning. The operation was performed at 2 p.m.

As it was thought that a suprapubic as well as a perineal incision would have to be made, and as the condition of the patient did not admit of a prolonged operation or anaesthesia, arrangements were made for one of us to operate on the perineum while the other did what was necessary in the suprapubic region. Open ether was administered, and an incision was made in the perineum over the mass, with the result that a number of faceted stones at once came into view and were taken out. In front of these was a larger stone, about the size of a bantam's egg ($1\frac{1}{2}$ by $1\frac{1}{8}$ in.), which was firmly impacted in the urethra, its narrow end being directed forwards. When this was removed it was found that there were many more of the smaller faceted variety packed closely together and forming the mass which had been felt per rectum. It soon became clear that a suprapubic incision would not be needed. When all the stones were removed by means of forceps and a scoop it was found there were 93 in all, including the large one; the 92 small ones ranged in size from $1\frac{1}{2}$ by $7\frac{1}{16}$ in. to $1\frac{1}{4}$ by $3\frac{1}{16}$ in. in size, and were all faceted.

After they were removed the cavity in which they were embedded was explored with the finger and found to be the posterior urethra much dilated. In its roof the internal opening of the urethra could be quite easily detected; through this opening a catheter was passed, and some ten or twelve ounces of urine were drawn off. Though this opening was quite patent and easily admitted the tip of the index finger there was not a single stone in the bladder, the whole of the 93 being jammed closely together into one mass in the prostatic urethra. The bladder was drained for a few days through the perineal wound and the patient made a good recovery, leaving the hospital two weeks after the operation.

E. R. WHEELER, M.B., B.S., F.R.C.S.,
Medical Superintendent, University
Hospital, Shantung, China.

APPENDICECTOMY DURING HERNIOTOMY UNDER LOCAL ANAESTHESIA.

THE following case presented some interesting features, and seems worthy of record.

A male child, aged 4 years, was transferred to the surgical side on October 4th, 1927, with the following history. He had a right-sided inguinal hernia which on successive occasions had been presenting more difficulty in reduction. He had a status lymphaticus, with a chronic obstinate cough associated with dyspnoea, and a definite record of dangerous idiosyncrasy to general anaesthesia. He had been circumcised two years or so previously under a local anaesthetic. He was of a peevish, apathetic temperament.

On this occasion (October 4th) he exhibited cenderness over the hernia. The hernia also presented a peculiarly solid consistence.