ness. After being off work a fortnight he made an attempt to resume it, but could do very little, and finally gave up altogether; and, during the two weeks prior to his leaving the Isle of Man, felt very ill indeed, suffering from frequent shivering, perspirations, pain in the right side, and dyspnoea. He arrived here (where his parents reside) on May 8th, about six weeks from the commencement of the illness, according to his own calculation. He walked down to my house (a quarter of a mile) the next morning, but was much exhausted. There was considerable emaciation; respirations 36, and very laboured; pulse 124; temperature 101°. No signs of any pulmonary mischief, but bulging over the hepatic region, most prominent just below the ribs, to the right of the ensiform cartilage. Dulness upwards to the third rib on right side, and extending across to left side at same level, and merging in the cardiac dulness. The apex of the heart was displaced two inches directly outside the nipple. The dulness below was within a couple of inches of the umbilicus; behind it reached the middle of the scapula on right side. A puncture with a fine aspirating needle, at the most prominent point, revealed the presence of pus, about half an ounce of which was drawn off, of greenish tint and somewhat sickly odour. Thus, the diagnosis of abscess was established; but the origin of it only conjectural, suppurating hydatids, however, being suspected, as there was no history of anything else that could have caused an abscess in the liver.

May 9th (the following day). I aspirated with a large trocar and cannula, and removed nearly three pints of pus. The tubes then became blocked with gelatinous pieces of membrane, and no more pus could be evacuated. The character of the contents of the abscess made the diagnosis tolerably certain, and it was placed beyond doubt by the discovery, upon microscopic examination, of one or two hooklets. Respiration was much relieved by the operation, and the temperature fell to normal for a couple of days. On May 14th, however, phlebitis commenced in the left leg, and there was much tenderness and swelling of the whole limb, with a temperature of 102.5°. There were also the physical signs of refilling of the abscess.

May 17th (eighth day after aspirating). Being kindly assisted by Drs. Matthews and Tooker, I made an incision over the most prominent part of the swelling, just below the ribs, an inch external to the tip of the ensiform cartilage; there were no adhesions whatever between the liver and the abdominal parietes, so several silk sutures were introduced to unite the two, antiseptic dressings used, and tolerably firm pressure applied to keep the parts as quiet as possible.

During the succeeding four days there was no change of consequence, the wound remained perfectly healthy, the phlebitis in the left leg gradually improved; temperature 100° to 101°.

May 22nd. Phlebitis occurred in the right leg, but not so marked an extent as in the left.

May 23rd. The sixth day after the preliminary operation, firm adhesions having formed, the abscess was opened and a large drainage-tube inserted; about fifty ounces of pus were evacuated, and numerous pieces of jelly-like membrane; the sac was well syringed out with weak iodine, and antiseptic dressings employed. Great relief followed the operation, the temperature becoming normal the second day afterwards; for three days the discharge was most abundant, consisting of pus and membranes; the side was strapped firmly to favour contraction of the cavity.

May 27th. Great discharge of bile, together with broken down orange coloured cysts; scarcely any pus. This continued during four days, there being as much as twenty to thirty ounces of apparently pure bile discharged per day. During this period there was complete absence of bile from the intestine, the motions being perfectly white.

May 31st. Bile appeared again in the stools; on previous evening there had been given a dose of grey powder and rhubarb.

During the following week the discharge consisted of mixed bile and pus, the quantity daily diminishing, so that on June 8th the cavity only held six ounces.

June 14th. A semi-solid mass of cysts came away suddenly, filling half a teacup, brilliant orange in colour; this was the last of the cysts.

July (early). The cavity only held half an ounce. A month later it was converted into a sinus three or four inches in length; and the patient, who three months before looked at death's door, now presented the appearance of robust health.

REMARKS.—The case illustrates the success of the plan (now, I believe, generally adopted) of performing at twice these operations on the liver. In this instance, though the tumour was

moderately prominent, and an aspirating needle had been twice introduced, an incision carried through the same point revealed no adhesions. In the absence of any urgent symptoms, it would seem wise to allow six or seven days to elapse between the operations, in order that firm adhesions may form. The chief points in the after-treatment are, doubtless, efficient drainage and thorough cleansing of the cavity with antiseptics, together with firm strapping of the side to promote contraction. A curious feature of this case was the passage of the whole of the bile externally during four days, there being coincidentally an entire absence of pus. Subsequent to this the quantities of bile and pus were in inverse ratio, thus showing the powerfully antiseptic qualities of the former.

NASO-LARYNGEAL INTUBATION IN DIPHTHERIA, ETC.

By J. JAMES RIDGE, M.D., B.S.LOND.,
Physician to the London Temperance Hospital.

As the subject of the operative treatment of diphtheritic asphyxia has been prominently dealt with in recent numbers of the JOURNAL, I venture to describe a new form of intubation which obviates many of the difficulties attending "intubation," especially that of withdrawing the tube. I have performed this operation four times, twice on one patient, and this, of course, is not a large experience. It is enough, however, to show the possibility of the operation, and I have been withholding the publication of this new method in the hope that I might have the opportunity of performing it on other cases, and with better success. For all the patients died, though not before it was clear that the operation had snatched them from imminent death three or four days previously, and, in one case, with such good promise of success, that I think it will be admitted that the operation is not only justifiable, but so promising that it deserves further and extensive use, with such additional precautions as my small experience has already suggested and future trials may indicate.

The operation is accurately described as naso-laryngeal intubation. The first case was that of a child of three years old, to whom I was called in consultation by Mr. Shaw, of Enfield Highway. There were the usual symptoms of diphtheritic croup and impending suffocation. Chloroform was administered, and a piece of wood held between the teeth as a gag. I then passed an ordinary piece of black unvulcanised milk-tubing along the nostril, first having anointed it with vaseline. I then passed my right forefinger into the mouth to the back of the pharynx, and hooked it round the end of the tube. A very little manipulation was sufficient to guide the tube into the glottis, the tube being pushed along the nose by the left hand. The air immediately began to enter and leave by the tube and some mucus was coughed out of the tube with considerable violence. The breathing was evidently relieved, but after about twenty minutes, during a fit of coughing, the soft india-rubber tube was expelled from the larynx, and bent so that the end came into the mouth. It was, of course, at once withdrawn. But even this imperfect operation gave relief. The death by imminent suffocation was averted, probably because the collecting mucus was got rid of through the tube, and the patient lived two days longer.

It was evident from the above case that the soft rubber tube was not the right kind to use, and I accordingly obtained an ordinary No. 10 gum elastic catheter, with an opening at the end, such as is used with a catgut guide. A suitable case presented itself on March 17th, 1888, when I was called in by Dr. Wood, of Enfield, with a view to the operation of tracheotomy on a boy, aged 7, who had been suffering from pharyngeal diphtheria since March 11th, with enlargement of the cervical glands. The larynx had been invaded on March 15th, and on the morning of March 17th suffocation was evidently impending, the chest walls and supra-sternal fossa being drawn in at every inspiration, with occasional struggles for breath. With Dr. Wood's consent, and while he administered chloroform, I passed a large catheter with open end along the nose and into the larynx, in the manner before described. There was at once the same expectoration of frothy fluid coughed with much violence through the tube, through which, however, air passed freely, as could be felt with the hand, and was shown by placing a flame near the end of the catheter. But in addition to this, it was clear that the presence of the tube in the larynx so distended the glottis that the air could pass outside the tube quite as much as through it, and, when the effects of

the chloroform had passed off, the boy could actually speak in a hoarse whisper. The respirations became quieter, and the suffocation was quite prevented. Food and medicine were administered entirely by the rectum, as it was impossible for him to swallow even water without causing a fit of coughing. A short time after the operation the mucous discharge became much less, and only took place occasionally. After a day or two he took a little water every now and then on purpose, in order to cough it out through the tube, which was thus kept clear. The air of the room was kept warm and moist, and eucalyptus oil was constantly vaporised; carbolic acid and glycerine were frequently applied to the fauces, and the exudation therein was kept under, and on the 21st had disappeared on one side, and was breaking up on the other. On the morning of March 20th, three days after the operation, he was breathing comfortably, twenty-six per minute, but there were indications of septicæmia, pale face, half-opened eyes, pulse 132, small. Carbonate of ammonia, quinine, and extract of bark were administered *per rectum*, and in the evening he was better, pulse 96, respirations 24. On the 21st he was apparently much better, his face had regained colour, he could speak, smile, and sit up; he had had sleep during the night, the exudation was disappearing from the throat, and the tongue was cleaning; pulse 96, respirations 24, breath coming freely both through the tube and the mouth. All seemed to promise well; his friends described how well he could swallow the water, and cough it up, and asked him to show me. This he did, and the cough was evidently looser, indicating that the false membrane was breaking up in the larynx, as elsewhere. The cough, however, this time was unusually severe, and in a few minutes he had a very bad struggle for breath; this became easier, but soon returned, and from that time became worse and worse; collapse set in, and he died in the evening.

A *post-mortem* examination was made next morning. The exudation was found to extend about three inches down the trachea, becoming gradually thinner, but not reaching below or occluding the tube; the trachea contained muco-purulent fluid which had collected before death; the exudation in the larynx was ragged and evidently breaking up. The cause of death was found in the lower lobe of the right lung, from the bronchial tubes of which, on section, purulent matter exuded; some of the exudation had become detached, and been drawn down into the lung, and hence the fatal result. This must always be a source of danger, but the means of obviating it I will discuss after a brief narration of the third case.

The third child was younger, only three years old. All the usual symptoms of diphtheria were present, and after the fourth day laryngeal symptoms supervened, proceeding as too usual to impending suffocation. Naso-laryngeal intubation with a catheter gave immediate relief, and the next day the child was playing about with the tube in his nose, tied in with a tape round the head. All went well for two days, when the father very foolishly and contrary to orders gave him beef-tea, which evidently passed into the larynx and lungs, and caused violent cough; even then, however, he rallied again, though not to the same extent, but the breath was so free, both through and outside the tube, that the next day I removed it. Pneumonia, however, had set in and was developing, due, I think, to the mistaken administration of the beef-tea. The breath in a few hours became much worse, and as a last resort I replaced the tube without chloroform and without difficulty, but though it at first seemed to do good, he very quickly succumbed; there was no *post-mortem* examination.

The catheters I have procured for future cases are good gum-elastic, silk catheters. I have cut off the eye, and introduce the end furthest from the eye, which is nicely rounded off and smooth, and, of course, without any bone tip. It is slipped along the nostril easily, and the forefinger of one hand guides it into the larynx. I have also procured a smaller long tube of the same material, which slides easily down the lumen of the larger tube, and have made several perforations in the side near one end. This end I propose occasionally to pass down right into the larynx, and then to withdraw the larger tube a little way until the end is out of the larynx. Through the smaller tube I shall then inject a small quantity of solution of peroxide of hydrogen, as a powerful and non-irritating antiseptic, which will thus be brought into actual contact with the interior of the larynx and the false membrane. As the small tube will be in the larynx, it will act as a guide to the larger, which can then be pushed back into its place, after which the small tube will be withdrawn. I hope thus to obviate some of the sources of failure in the above cases.

I also propose to pass another similar catheter along the other

nostril at the same time, but into the œsophagus, so that food may be administered thereby from time to time. The tubes will be plainly marked, so that the food may not be accidentally sent into the larynx.

I trust that others may have an opportunity of testing this new method of procedure, and as it is bloodless one has less difficulty with the parents, the operation need not be deferred so long, and there is less risk of septicæmia.

SENILE RHEUMATIC GOUT.

By WILLIAM BRUCE, M.A., M.D.,

Direct Representative for Scotland, General Medical Council; Surgeon to the Ross Memorial Hospital, Dingwall.

THERE is, perhaps, no disease as to which professional opinion differs more than as to rheumatic gout. This diversity of views is unfortunate, as it affects the kind of treatment and mode of life of the patient, and it disturbs the lay mind and gives occasion for remarks as to the uncertainties of medicine. One school leans more to the gouty origin of the disease and another to the rheumatic. The victim himself naturally prefers to believe he is suffering from rheumatism, and becomes thereby free from many of the restrictions he has got to submit to if dubbed gouty.

On what lines are we to go in diagnosing between rheumatism and gout? First as to acute gout, I fancy there can be no dispute; but the acute classical type as described for all time by Sydenham, like other types of disease, is not so very common as supposed. Acute rheumatism of the recognised kind is a disease *sui generis*; and for my part I have been for long strongly of opinion that it is of germ origin, and totally distinct etiologically from chronic rheumatism. It is an exception to most other zymotic diseases in its tendency to recur, and probably its victims are more likely to suffer from disease of the joints if they survive the original attack, and these diseases may be either rheumatic or gouty. Acute rheumatism must not be confounded with acute polyarthritic gout, which it resembles. The danger lies in mistaking the gouty attack for rheumatism, and not the opposite. The points of difference lie in the age, family history, the fact of previous attacks of gout, the general build of the patient, and the causes of the present illness, which will, if closely scrutinised, reveal irregular living, such as the abuse of alcohol, etc., as well as what the patient will mostly insist upon, fatigue and exposure. The following is a typical case, and they are not very uncommon.

X. Y., a professional man, aged 40, having gone through a severe Parliamentary contest, working night and day, is suddenly seized with pains in most of his large joints. Acute rheumatism is diagnosed, and he is treated strictly with salicylates, etc. Recovery is slow, and he is left with much stiffness of the articulations and is puffy and anæmic when he applies to me at Strathpeffer. Cross-questioning brings out a clear history of family gout, which is borne out by the style of living of the patient. Under the use of baths, waters, and very strict regimen, including complete abstinence from wine and spirits, he makes a brilliant recovery. Next year he returns, but not bad enough to be sufficiently cautious, and the results are not so pleasing.

We have spoken so far of acute rheumatism and acute gout: we now pass on to consider rheumatoid arthritis of the common (?) definite type, which I agree with Garrod (who has done so much in this field) to be a clear and distinct species of joint disease—distinct in its nature, origin, treatment, and termination. I need not enlarge upon this, unless it be to point out that it too may be inflammatory at the onset, and accompanied by pyrexia. It is undoubtedly more common in women than in men, and especially frequent in its origin about the periods of puberty and menopause. I believe that, long as it may be in coming, there is almost always a distinct crisis in its history, and a time when recovery tends to be spontaneous. Perseverance in suitable regimen, which must be liberal, and in baths, massage, change of air, etc., will in most cases ultimately keep in check, if not subdue, the disease. Of this result we have had some interesting cases at Strathpeffer, and one or two (after successive visits) undoubted cures. In this, as in so many other complaints, cheerfulness and hope are the best of all medicines.

Muscular rheumatism is, again, an affection of a clear enough type; but here I would warn practitioners to make sure that the joints also are not affected, as joint affections always involve the