gr. 1/100, morph. sulph. gr. 1/6, atropine sulph. gr. 1/180; "Hyoscine compound B" contains hyoscine hydrobromide gr. 1/100, morph. sulph. gr. 1/4, atropine sulph. gr. 1/150. The injections are given half an hour before the time of operation. The patient is then anaesthetized with gas and oxygen, and the anaesthesia deepened with ethaneseal or mixture until the breathing is deep, regular, and slightly stertorous; the colour should always be pink. The facepiece is then removed, a gag placed in the mouth for such cases as enucleation of the tonsils, and the anaesthetic is continued by means of a tube placed in the mouth.

One of the astonishing things about this method is the small amount of mixture necessary to maintain the requisite anaesthesia. Indeed, in a certain proportion of cases hardly any mixture at all is necessary for the rest of the operation—that is to say, after the facepiece has been removed; after that, gas and oxygen alone is sufficient.

In this connexion I must mention that there is one particular type of case where I have been forced to use chloroform alone as my adjuvant. I refer to cases of diathermy. In our throat department Mr. Harmer is treating cases of carcinoma of the tongue, fauces, etc., with the diathermy cautery, and, I gather, with excellent results. Now occasionally in these cases there is a certain amount of sparking, either accidental or intentional, and so one cannot have any ether in the adjuvant bottle lest there should be an explosion, and must use chloroform.

In a large number of cases the best way to continue the anaesthesia is to pass one or two small rubber tubes through the nostrils, and pass the anaesthetic into the post-nasal or endopharyngeal space; I do this by means of a metal stirrup and tubes.

For operations such as submucous resection of the nasal septum, after anaesthesia has been obtained—and here let me say that in nose and throat work as well as in abdominal work I think that it is essential to get the patient "well under" before the operation begins—an artificial airway is placed in position and the anaesthesia continued by what really is an endopharyngeal method. An airway devised by Mr. Clausen, one of our residents at St. Bartholomew's Hospital, is one of the best I have ever seen; the anaesthetic is delivered at the upper opening of the larynx, and the return air is diverted by a tube away from the operator and anaesthetist.

The results that I have obtained so far with endopharyngeal gas-oxygen-ethaneseal have been most encouraging, and I hope in the near future to develop the method still further. The endotracheal administration of gas-oxygen-ethaneseal is another recent development of the method, and one that appears likely to be very valuable for work not only in the mouth and neck, but also for upper abdominal cases, since relaxation of the abdominal muscles is readily obtained. Sufficient work, however, has not yet been done with this method to warrant me at this early stage to go into details.

DEMONSTRATION.

Dr. CHRISTOPHER MAYHEW (Southsea) showed a new apparatus of his own invention for administering warmed ether vapour, the chief advantages for which were claimed to be its lightness and portability, the whole of the apparatus, weighing only 1 lb., being capable of being taken to pieces and stored in the warming cylinder.

THE TREATMENT OF HAEMORRHOIDS BY INTERSTITIAL INJECTIONS.

BY

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As great interest has recently been aroused in the treatment of haemorrhoids by injection of carbolic acid, I wish to record my observations and conclusions drawn from a series of 150 cases treated in the Royal and Western Infirmarys, Glasgow, during the past year. These patients were kindly sent by the various surgeons of the Royal Infirmary, and Sir William Macewen permitted me to treat the haemorrhoidal cases in his wards in the Western Infirmary.

The treatment consisted in the injection into the pile of 10 per cent. carbolic acid in liquid extract of hamamelis. During the Annual Meeting of the British Medical Association in Glasgow (1922) the method was demonstrated in Mr. Kay's wards in the Glasgow Royal Infirmary by Mr. Souttar of the London Hospital.

The cases were not selected; all degrees of piles were treated, from the simple internal piles with no prolapse to those with marked prolapse. The class of patient treated consisted chiefly of manual workers engaged in such arduous occupations as mining, engineering, and labouring. The ages of the patients varied from 21 to 70 years. The number of injections needed to effect a cure did not seem to depend on the age of the patient or the duration of the complaint. One patient who had been suffering for one year required seven treatments, another case of fifteen years' duration needed only five. The number of piles present varied, and the greater the number of piles the greater the number of treatments. The size of the piles seemed to have some effect; the larger the pile the fewer the injections. Bleeding usually stopped after the first injection. In only one instance was a second injection required for this symptom, although "bleeding piles" comprised 40 per cent. of the cases. Haemorrhage after injection through the puncture of the needle is slight, and I have not seen a case where bleeding, due to the treatment, required any of the special forms of arresting the haemor-

rhage described by Dudley D'A. Wright in the second edition of his pamphlet on this subject. Where inflammation was marked no injections were given until this was subdued; if only slight, injections were given, and although the pain following was more marked than usual it was never severe and the piles quickly underwent thrombosis.

Immediately after injection the piles swelled; the mucous membrane over some of them became blanched; and where external piles were also present the external pile corresponding to the internal one injected also became swollen in many instances. In only four cases did the treatment keep the patient off work, the duration of incapacity being two days, three days, two weeks, and one week. In these cases marked prolapse was present, and although the piles were reduced after injection reduction was not maintained and strangulation occurred. In this class of case I now only inject one pile at a time, and insert a gauze pad into the anus with a large external pad firmly retained in position by a perineal bandage. Strangulation has not occurred in the last fifty cases of this series.

The injections were given at weekly intervals, and the average length of treatment was five weeks. The thrombosis produced extends along the veins until they perforate the coats of the rectum. In no case has embolism, peritonitis, or pyaemia occurred, such as has been described by others.

After the first visit the patients returned with great regularity, submitted themselves with every confidence that they were not going to suffer much pain, and all stated that their rectal and general condition had greatly improved after the first injection, their usual expression being, "they never felt better in their lives." Four of them had been operated on for piles, and stated that they would not now subject themselves to operative measures on account of the pain associated with them and the long time they were incapacitated after the operation. Cycling after the injection is not recommended, although one man (a furnaceman) immediately after his injection cycled four miles to his work and after work cycled the same distance home again. The progress of this case was uneventful. In some cases two to three months after the injections small "tags" were noticed where the piles had been. If these were of any size or caused any discomfort they were removed. One case, although the patient stated that he felt much better after the treatment, was rather disappointing; the piles became thrombosed but the sphincters did not regain their tone,

two fingers being easily inserted into the rectum without causing any discomfort. There had been marked prolapse, and this was only slightly improved. His general condition was poor.

Perhaps the most striking case was one where the man had suffered for fifteen years, and it was with some difficulty that he was persuaded to submit to out-patient treatment as he was determined to have the operation performed. For some years he had been forced to wear a support to prevent prolapse of the rectum whilst walking. The mucous membrane was seen to be very markedly prolapsed and several piles were present, the anterior pile being the size of a walnut and the left lateral the size of a very large Brazil nut. The latter after two injections was completely thrombosed and the anterior after three injections. Prolapse soon disappeared, the anal orifice became normal, the sphincters regained their tone, and no stricture of the canal has developed.

Before subjecting a patient to this treatment he should be as thoroughly examined as if a major operation were to be performed. I would strongly insist on this, as the only death with which I am acquainted occurred in a case of advanced Bright's disease. Too much carbolic should not be injected—2 to 5 minims of the mixture is sufficient to inject into a pile at one time—and not more than three piles should be treated on any one occasion. If large amounts of carbolic are injected carboloria may result. Bright's disease, diabetes, pernicious anaemia, advanced cardiac disease, hemiplegia, and epilepsy are all contra-indications.

The advantages of the method are that it is almost painless—some nervous patients (especially women) complain of pain for some time afterwards, but this is very rarely severe; no anaesthetic is required; and the treatment can be carried through from beginning to end without the patient being incapacitated or his daily routine interfered with.

Since completing this series, I have tried the effect of injecting 30 per cent. sodium salicylate into piles. The results of the few cases (40) thus treated are as good as those treated with carbolic acid, but the pain immediately after injection is more severe and lasts longer.

HAEMOPHTHALMUS IN ASSOCIATION WITH TUBERCULOUS FOCI IN THE CHOROID.

BY

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It may be said that the diagnosis of tuberculous inflammation of the middle coat of the eye, assuredly a secondary infection, is a matter of more or less clinical probability. The family history and the personal history of the patient, together with the finding of a tuberculous lesion elsewhere and the exclusion of *Spirochaeta pallida* infection, form, as a rule, the basis of one's etiological belief. There is also that fallible but often trustworthy factor, clinical instinct. Not infrequently the primary focus remains undiscovered; and such aids as von Pirquet's skin reaction and Calmette's conjunctival reaction have not secured the allegiance of clinicians. A diagnostic help that may have unfavourable consequences in this relation is the hypodermic injection of Koch's old tuberculin. Its value is definite only if it be followed by the occurrence of irritation or an increase of irritation in the affected eye. But one cannot foresee how much irritation may arise, and it has happened that such an aggravation of the inflammation has been provoked that neither patient nor oculist was pleased with the mode of confirming the diagnosis.

CASE I.

Miss T., aged 26, had noticed, one week before visiting me, that the left eye was blind. She had lighted a candle in a dark room and, upon turning sideways towards the light, thought it had gone out. She then faced the lighted candle and, by closing each eye in turn, found that the left one was blind. When I examined this eye its pupil was inactive to direct illumination, there was a floating opacity in the vitreous humour, and the disc, which was scarcely recognizable, seemed to be enveloped in a bulky oedema with a

streak of haemorrhage on its surface. The floating opacity was situated in the centre of the vitreous and was so delimited as to allow of the red reflex being clearly seen all round it. The blood had been poured out into Cloquet's canal. Towards the nasal side of the disc was seen a patch of choroidal atrophy bordered by a line of dark pigment. The eye was blind. One month later I noted "floating opacities in the vitreous; pale disc indistinctly outlined; periphery of disc slightly prominent; arteries small." After five months the disc had the filled-in appearance, pale colour, and smudged edge of secondary optic atrophy. Immediately adjoining the lower border of the disc and spoiling its regular contour was a flat pale area about one-fourth of the disc's diameter in size. The right eye was normal.

Miss T.'s brother, aged 24, asked me to look at his right eye, which was not as good as the left. Below the right macular region were a sharply outlined, brilliantly white patch (almost as large as the disc) of choroidal atrophy and a tiny ill defined pale nodule alongside it. The visual acuity of this eye was 6/18; the other eye was normal.

Both brother and sister had always enjoyed good health. Miss T. declared herself to be somewhat run down, in consequence, she believed, of her nursing duties during her mother's last illness, which had terminated three months previously from heart failure. Their mother, over 70 at the time of her death, had suffered for years from a bronchial affection, which was said to be of a non-tuberculous nature. A sister of theirs, a child of 13, died of pulmonary tuberculosis.

CASE II.

E. B., a robust young woman of 24, noticed, a few days before coming to hospital, that the vision of the right eye had become greatly impaired. With this eye only shadows could be seen. The vitreous contained a large felt-like mass, which effectively obscured all details of the fundus. It was thought that a dimly seen glistening streak might be a tear in the retina. The other eye was normal. A general examination failed to reveal anything amiss. A differential blood count presented the normal picture. Rest, avoidance of stooping, and 5 grains of calcium lactate daily made up the treatment.

Three years later the patient returned to hospital on account of a simple phlyctenular conjunctivitis.

After her last visit she had remained in bed for one year! The vision of the right eye was 6/12, and of the left one 6/12 (partly). Far forwards in the vitreous chambers were seen floating knots and threads. Each fundus exhibited, at the periphery, the albinotic appearance seen after atrophy of the retinal pigment layer. There was in the right eye a patch of choroidal atrophy, and in the left one a raised focus at the junction of the lower and nasal borders of the disc. Engorged vessels were arched over the prominence.

Very often one sees in chronic tuberculous choroiditis foci in different stages of evolution. Some of the foci will have become atrophic patches, others will be recent, showing ill defined edges and raised forms. In the first case some support was given to the diagnosis of tuberculosis by the family history and the examination of the brother's eye. Both patients gave a negative Wassermann reaction. The phlyctenular conjunctivitis of the second case was not, in a pathological sense, out of place. But perhaps it is best to say that the opinion of the nature of the cases is the result of cumulative clinical impressions.

APPENDICITIS AND INTUSSUSCEPTION IN A DOG.

LYMPHATICOSTOMY FOR SEPTIC PERITONITIS.

BY

JOHN D. MALCOLM, F.R.C.S. EDIN.

THE publication of the following story of the illness, death, and *post-mortem* examination of a puppy may be justified not only as a contribution to comparative medicine, but by the fact that the conditions found raise some interesting general questions.

A terrier, aged 8½ weeks, when seen on November 8th, 1922, was in a state of extreme emaciation with a poor appetite, and hardly any of the liveliness of a puppy. The bowels, which were at first relaxed, later became constipated. Castor oil caused vomiting and loose actions, but did not clear the intestine. There was no abdominal distension nor definite evidence of pain on manipulation. On November 15th and 16th hard masses were felt towards the pelvis. On November 17th an enema induced a discharge of faeces tinged with blood, and death occurred on that day.

Autopsy showed an intussusception involving the last twenty-four inches of the small gut. The peritoneal surfaces at the distal