gradually shortened, until it was dispensed with on the twentieth day.

For a few days after the operation pus was found in diminishing quantities in the urine, until it finally disappeared. The amount of urine gradually increased in quantity, reaching to as much as 64 ounces a day. The temperature, which previous to the operation had been hectic, fell to normal within twenty-four hours of the operation, and has never since reached more than 100.4°, and that only once, namely, on the third day. We found no stone nor sign of tuberculous disease. The man is now fat and well.

I have to thank my colleagues, Mr. McNiell and Mr. Stewart, for valuable assistance in this case.

A CASE OF HEPATIC COLIC CURED BY THE INGESTION OF OLIVE OIL.

By ALFRED S. GUBB, M.D. PARIS, ETC.

A GREAT deal of scepticism has been felt and expressed in regard to the benefit alleged to have been derived from the ingestion of tolerably large quantities of olive oil in the treatment of hepatic colic. The fact that the oil during its passage through the intestines undergoes changes therein, and is voided in masses which bear a striking superficial resemblance to gall stones, has on various occasions been used as an argument against the oil having had any share in procuring the expulsion of genuine gall stones. A case which recently came under my observation seems, however, to show that benefit can be and is derived from this treatment whatever may be its *modus operandi*.

The patient was a gentleman, aged 46, who had a first attack of trouble in the region of the gall bladder, in June, 1890. It began with sharp pain associated with sickness, relieved only by repeated hypodermic injections of morphine. The pain recurred in paroxysms for a week, during which period he remained in bed. There was no jaundice but the motions were markedly light in colour. No search was made for a gall stone. A week later the symptoms recurred along with the vomiting, and this time he was systematically purged by means of mineral waters, turpentine stupes and poultices being applied freely to the painful region, and the diet carefully regulated. No relief to the pain resulting except by the aid of morphine. He was ordered hot baths every night for a quarter of an hour, and told to wear a piece of spongiopiline over the liver. The symptoms having partially subsided he was sent to the Engadine with directions to take plenty of exercise, and in six weeks he returned free from trouble. He remained free from pain until November, 1893, when the old symptoms returned, associated with intense jaundice. This condition persisted, at first with intervals of three weeks, until February, 1894. The intervals gradually became shorter until at last he was never free from pain for more than thirty or forty hours at a stretch. Needless to say that during this period the diet was carefully regulated, but without any effect either on the pain or the jaundice. On one occasion he tried the experiment of abstaining from food altogether for three days, but he felt worse after than before. The patient's condition was rapidly becoming one of some gravity, for he had lost nearly 3 stone in weight and was practically incapacitated from attending to business. The gall bladder was greatly distended and tender, and hard bodies could be felt on palpation. He was gradually becoming reconciled to the prospect of surgical interference as the only means of overcoming his trouble when I suggested to him to give the olive-oil treatment a trial, though I must confess I did so without any belief in its efficacy—a scepticism which I did not, moreover, hide from my patient. He gladly agreed to try it as a last resort before having recourse to a surgeon, and towards the end of February he began the treatment, taking 5 grains of calomel at night followed by 8 fluid ounces of pure olive oil in the morning. He experienced no difficulty in swallowing the oil, which never provoked nausea, still less actual sickness. After the very first dose the pain ceased, and the motions became darker, evidently containing bile. In the course of two or three days they resumed their natural appearance. At the

same time the urine, from a dark brown, became quite light in colour.

It is now a year since he began the treatment and eleven months since he discontinued it, and he has never had the slightest return of the symptoms in spite of the fact that he has long since abandoned all restrictions as to diet, though on my advice he has become an enthusiastic cyclist, and weather permitting takes daily exercise. No stone was ever detected in the faeces, though, for a time at any rate, the patient made diligent search, which was rendered very tedious by the presence in the motions of numerous concretions of cheesy consistency, evidently due to the partial saponification of the oil. Nothing can at present be felt in the region of the gall bladder, and the patient is in every respect in the best of health.

INJECTION OF OLIVE OIL FOR REMOVAL OF IMPACTED BILIARY CALCULI.

By EDWARD M. BROCKBANK, M.D. VICT., M.R.C.P. LOND.,
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IN the interesting series of papers on the surgery of the gall bladder and ducts which have appeared in recent numbers of the *BRITISH MEDICAL JOURNAL*, a good deal of attention has been paid to the treatment of those cases in which calculi are lodged in the hepatic, cystic, or common bile ducts, and cannot be removed at the time of operation. Such cases are very difficult to treat. The ducts are deeply situated, and the operator experiences considerable difficulty in localising the stone and in examining it with the finger. Various mechanical methods have been suggested, and are actually in use for removing such impacted stones. The chief of these are crushing with padded forceps or breaking up with a strong needle. There is a source of danger in both these methods, for rupture of the duct may easily result from either, and peritonitis is likely to supervene.

Another method suggested by myself in the *Manchester Medical Chronicle* for January, 1894, is well worth a good trial. It has the merit of being very simple, free from any source of danger, and very likely to remove the obstruction fairly rapidly. The method is that of injecting olive oil or oleic acid, warmed up to about the body heat, into the gall bladder and ducts through the fistulous opening. I was led to suggest this method from observations made in 1892 on the solvent action of olive oil and oleic acid on gall stones. Both substances are ready solvents of cholesterolin and gall stones, as the following results will show:

A calculus placed in olive oil (temperature kept constantly at 98° F.) lost in four days 50 per cent. of its weight (1.6 g. to 0.8 g.). A similar calculus placed in oleic acid under the same conditions lost 63 per cent. of its weight in two days (1.21 g. to 0.44 g.).

An idea of this rapid solution of biliary calculi can easily be obtained by placing one in olive oil or oleic acid and keeping it about the body heat for twenty-four hours. I have only been able to try the treatment in one case referred to below. For obvious reasons the result was unsatisfactory, and it is with the idea of getting others to try the treatment that I give a short description of the apparatus itself and the method suggested for its use:

G. E., a labouring man, aged 54, admitted to the Manchester Royal Infirmary on March 1st, 1894, complained of having suffered for some months previously from intermittent colicky pains in the right hypochondriac region accompanied by jaundice. On admission he was markedly jaundiced, the urine contained much bile pigment, and the stools were clay coloured. He complained of pain in the region of the gall bladder, and on examination a pyriform tumour was found to extend from the ninth right costal cartilage towards the umbilicus. It moved down with inspiration. Dr. Dreschfeld, under whose care the case was, diagnosed an impacted gall stone, and Mr. Jones, who was called in in consultation, being of the same opinion, it was decided to perform cholecystotomy. This was done about two weeks after admission, and the pyriform mass found to be the gall bladder distended with blackish-green thickened bile. No calculi were found, but Mr. Jones felt with his finger a vague swelling deep down about the junction of the common duct and the duodenum. No attempt was made to crush the (?) stone. After the operation bile flowed freely through the fistulous opening. Following upon the operation the jaundice disappeared and the urine lost its bile pigments, but the stools remained clay-coloured; the pain disappeared. As this condition of affairs persisted for two or three weeks I tried the effect of injections of olive oil, using the apparatus and method described below. The patient experienced no discomfort whatever, but was much interested with and helped in the proceedings. When the pressure was raised by elevating the funnel above 12 inches, the patient experienced a sense of fullness, and once or twice said he felt