braneous wall. Leyden (*Beiträge zur Pathologie des Icterus*, Berlin, 1866, p. 119) says that these saccular dilatations usually become separated from the gall-duct by chronic inflammation of the surrounding liver-tissue. Their contents become watery, thin, or tenacious. Their origin is then doubtful. If they dry up, it is, indeed, difficult to distinguish them from dried up echinococci, unless hooklets or laminated membranes be found. Monneret (*Traité élém. de Pathologie interne*, Paris, 1864, tome i, p. 660) describing these dilatations, has compared them to the saccular dilatations which the bronchi undergo, a comparison which can scarcely be approved of, as the causes in the two cases are altogether different; in the liver, a pent up secretion causes the widening; in the lung, it is most commonly caused by disease of the surrounding lung-tissue.

Friedreich (*Archiv für patholog. Anatomie*, Band XI, 1857, p. 466) has described a cyst, which, he inclines to think, resulted from a dilated gall-duct. In the contents, he found well marked ciliated epithelium. I believe no similar case exists on record. The epithelium of the gall-ducts is ciliated in some of the lower animals during foetal life; and in some it persists even during the whole of life.

I have also not met with any similar case to that of Boismont, which is quoted by Abercrombie (*Diseases of the Stomach, etc.*, London, 1837, third edition, p. 331). The liver had the appearance of a large undulating cyst. The appearance was found to depend upon a remarkable distension of all the biliary vessels with dark coloured bile, and was accompanied by wasting of the proper substance of the liver. The affection seemed to depend upon a singular obstruction of the common duct by a membranous band which passed over it.

It is not uncommon to find large ducts opening into hydatid cysts and abscesses. A large cyst will not, in all probability, be due to a dilatation of the duct. The contents are of little help, because hydatids often hold masses of red hæmatoidin exactly corresponding to those spoken of by Virchow above. The diagnosis will really depend upon the structure of the wall. The laminated structure of the hydatid membrane is diagnostic. The question of diagnosis from abscess is much more difficult. It depends chiefly upon two points: whether any obstruction in, or general dilatation of, the bile-ducts exist; and whether the lining membrane of the gall-duct can be traced around the walls of the abscess. Joffroy (*Comptes rendus des Séances de la Société de Biologie*, année 1869, p. 218) gives the following rules. In abscess, secondary to rupture of the bile-duct, there is often no limiting membrane, or, if there be, it is not lined with columnar epithelium, and the contents of the abscess do not show columnar epithelium, but liver-cells in process of disorganisation. The collections of pus found in saccular dilatations of the bile ducts, on the other hand, are always bounded by a membrane formed by the dilated bile-duct, which, in some places at least, retains its epithelial covering; and columnar epithelium is also found with the pus: liver-cells are never found.

The amount and extent of the general dilatation of the ducts depend upon the degree of obstruction and the length of time which it has lasted. If the obstruction be complete, of course the dilatation will be great. In some cases, the dilatation does not reach the interlobular ducts. I am doubtful, from my own observations, if the capillary ducts ever become varicose, as Oskar Wyss (*Archiv für Path. Anatomie*, 1866, Band xxxv, p. 553) and H. Meyer (*Stricker's Medicinische Jahrbücher*, Wien, 1872, p. 133) have described. I have never seen such an appearance in man; or in animals whose bile-ducts have been ligatured. The walls of the bile-ducts become thickened, even to the naked eye. Under the microscope, this thickening resolves itself into a great overgrowth of the fibrous coat, in which abundance of new lymphatic elements are to be seen, precisely similar to those observed in ordinary cirrhosis.

Many observers have been unable to find any epithelium lining the walls of these dilated bile-ducts. I doubt if this statement be universally true. In three cases which I have lately examined, in which the large ducts were dilated to the size of a man's little finger—in one case from disease of the head of the pancreas, in the other two from gall-stones—I was certainly unable to find any epithelium on the larger ducts, which measured ten millimetres when cut across. In those measuring only four millimetres, I found abundance. One source of fallacy must be guarded against. All washing or wiping of the ducts must be avoided. For, in a case of complete obstruction to the ducts by a hydatid tumour, followed by great dilatation, I found abundance of epithelium in all the preparations taken from the ducts immediately they were opened; but none could be found in the specimens taken after a stream of water had been poured on the ducts or their surface wiped with a sponge.

In those cases which I have hitherto examined, the left branches of the hepatic duct have always been much more dilated than the right. This appearance is probably due to the left lobe of the liver being less

bulky than the right, and thus offering less resistance to the dilating tubes.

The catarrh which is set up by the long continued obstruction sometimes goes on to suppuration of the duct; and a mixture of pus and mucus is found in the biliary canals. In another form, the suppuration becomes local and abscesses form. This result of obstruction seems to have been first noticed by Cruveilhier (*Anat. pathologique*, livr. 12, pl. 4 and 5; tom. ii, livr. 40, pl. 1) and Frerichs (*Hannov. Annal.*, 1845, Heft. i and ii, quoted in Canstatt's *Jahresbericht*, 1845, Band i, p. 81). The abscesses are usually multiple, near the surface of the liver, and, when cut across, their contents are seen to be a mixture of pus and bile. They are rarely larger than a hazel-nut in size. They greatly resemble the secondary abscesses seen in pyæmia.

The mode of origin of these little abscesses seems doubtful. Cruveilhier (*Archives générales de Médecine*, 1857, Janvier, p. 54) says that he satisfied himself that they had, in his case, their origin in the dilated bile-ducts. Joffroy (*loc. cit.*) speaks of two kinds: one, a saccular dilatation of the duct, filled with pus; the other, an abscess secondary to rupture of the duct. These two kinds may exist together in the same liver. Both are surrounded by an overgrowth of the connective tissue of the liver, containing nuclear elements. Bamberger also (*Krankheiten der chylopoietischen Systems*, Erlangen, 1864, 2te Aufl. p. 198) makes this division. Leyden, however (*op. cit.*, p. 123) considers that these abscesses may have another mode of origin. In one of his dogs, whose bile-duct had been tied, he found many small and large abscesses in the liver-tissue without any dilatation of the ducts, except of the large ones; and he argues from this that the first beginnings of the abscess must have taken place in the liver-tissue surrounding the abscess. This mode of explanation would seem to exclude rupture of the ducts as a source of abscess. There are some observations by Bristowe (*Transactions of the Pathological Society of London*, 1858, vol. ix, pp. 223 and 286) which support Leyden's view. He found, in a case of obstruction to the bile-ducts, an abscess of the liver, spherical, an inch in diameter, which shaded off into the surrounding tissue. Two considerable branches, somewhat dilated, passed through the substance of the mass. The cause of obstruction was a new growth springing from the inside of the ducts at the junction of the hepatic and cystic. It should also be noticed that there were several ulcers in the duodenum. In another place, speaking of the modes in which hepatic abscesses may be formed, he says that the abscesses were not positive cavities lined by a cyst-wall, but rather indistinctly circumscribed portions of liver-structure in which softening and rarefaction had taken place, and which blended insensibly with the surrounding healthier parts. In this case, the obstruction was a gall-stone.

I have not yet had the opportunity of examining any case of multiple liver-abscess arising from obstruction; and the mode of origin is still very obscure, as so little attention has been as yet paid to the histology of the disease. In the only case of abscess in the liver following obstruction to the ducts which I have seen, the abscess was a solitary one. It clearly did not arise from a saccular dilatation of the duct, for the cylindrically dilated duct opened into the floor of a depression the size of a walnut, near the surface of the left lobe, and one-half of the duct, not more dilated than before its entry into the abscess, formed part of the floor. In this case, I am inclined to think the abscess was formed by rupture of the duct, seeing that so much of the duct was preserved. The abscess afterwards found its way into the pericardium and pleura. The connective tissue throughout both lobes of the liver had undergone an increase, but especially in the neighbourhood of the abscess, where the growth of connective tissue had left only small groups of highly coloured many-sided cells as remains of the proper parenchyma. This case was read last November before the Pathological Society.

[To be continued.]

IMMINENT DEATH FROM INHALATION OF CHLOROFORM.

By RICHARD DAVY, F.R.C.S.,
Surgeon to the Westminster Hospital.

JOSEPH HARRISON, aged 20, single, traveller, was admitted into the hospital on February 21st, 1874, the subject of external hæmorrhoids. On February 23rd, chloroform was administered (by Clover's apparatus) in the theatre by Mr. Beer; and there were present the house-surgeon and his assistant, the house-physician, a student, and myself. Mr. Beer noticed, amidst some struggling, that both pupils were dilated; but the respiration was not stertorous. The operation of slicing off the hæmorrhoids and applying the actual cautery was quickly finished by the house-surgeon, when at once respiration ceased, the features became

lividly blue, the eyeballs turned upward, and to all appearance the man was moribund. We ripped his shirt open all the way down, and told ourselves off for duty; viz., two at the patient's arms for Silvester's method of artificial respiration (relieving guard); one at the feet (affording counter-resistance); one to admit fresh air; one to turn the face on the left side, hold the tongue forward, and wipe the mouth; one to spank the face and walls of the chest with a cold wet towel. Artificial respiration was kept up at the rate of twenty-six per minute. In five minutes he drew a natural inspiration and opened his eyes, and half a minute afterwards he laughed at the joke of a student labelling his hat "Poison"; i.e., "not to be taken". He had inhaled chloroform in the New York Infirmary in 1870. There was no cardiac lesion.

REMARKS.—1. This is a trifling operation, it may be said, for an operating theatre: yet our being able to readily fall in at work was conducive to success, and economised the distress of fellow-sufferers. 2. The recovery from the effects of chloroform-inhalation was rapid. We worked the pump-handles sharply, that fresh air might quickly replace the vapour of chloroform in the respiratory area. Our time-table records that chloroform-inhalation began at 12 o'clock; the operation began at 12.5 P.M.; it was completed, the man was moribund, and artificial respiration was commenced at 12.8 P.M.; artificial respiration stopped and natural commenced at 12.13 P.M.; consciousness was complete at 12.15 P.M. 3. We are all glad that due exertion has prevented the death of a fine young fellow inhaling chloroform for a slight operation, and are inclined to prefer six reliable assistants to any number of galvanic machines.

MODIFIED SYPHILIS.

By W. S. OLIVER, M.D., F.R.C.S.I., Surgeon-Major, 60th Rifles.

I HAVE seen, in the JOURNAL of March 7th, a short account of a most interesting discussion on syphilis, at a meeting of the Medical Society of London on February 9th, at which Mr. Morgan (Dublin) brought under notice a remarkable series of facts in connection with this disease. The results of his researches help so forcibly to corroborate opinions I have entertained for some years past, that I cannot resist offering them for what they are worth.

After more than sixteen years' experience, I entirely concur with Mr. Morgan in his views as to the "modification of syphilis by descent"; I desire further to assert that it is syphilis in this "modified" form that the Army Medical Officer has to deal with in 70 per cent. of the cases of so-called "primary syphilis" which come under his notice. Or, to express myself in plainer terms, judging from the source of contamination in those cases, the appearances and characters of the sores themselves, and the nature of the secondary symptoms ensuing on what is generally considered "primary" syphilis in the army (at least), I am most firmly convinced that not more than 30 per cent. of those cases, if so many, can be considered true primary syphilitic chancre at all, but are merely the primary local evidences of the transmission of secondary syphilis from one person so infected to another not previously contaminated.

The history of those cases is usually as follows. A soldier, who, according to his own statement, and of course in accordance with the entries in his "medical history sheet", never before had syphilis, cohabits with the usual "soldier's prostitute", who, as a rule, has had time to descend very low in the grade of her calling. Within a week or ten days after connection, or even as early as the third day, should the poison be virulent (phagædemic), one or two, or even three, papules, or abrasions, or an excoriation, perhaps, appear and run rapidly into ulceration, and, in the course of from two to five days, come under the notice of the medical officer as either sloughing unhealthy ulcers, or grey non-granular superficial, or, perhaps, elevated, circumscribed sores with a tenacious muco-purulent discharge on the surface, and resembling in some measure secondary syphilitic ulcers elsewhere. Induration is not usually present in those cases, especially at this period, but it may afterwards appear to a limited extent, especially when the sore or sores are situated on the corona glandis, and are long in healing; but, when present, it is never so early in showing itself, nor so well marked and defined as is the case in a real primary chancre. And, though the presence of induration indicates, I think, an early contamination of the system with secondary syphilis, its absence from the sore altogether is never an authentic sign that the sore is non-infecting. Enlargement of the glands in one groin, and in a line with Poupart's ligament, is an usual accompaniment of the disease, appearing early, with inflammation, if the sore or sores have been concealed, or the parts irritated; or late without inflammation, if the local disease have been treated early, but is slow in disappearing. Enlargement of the glands of the neck

and axilla is not an usual concomitant of this stage of the disease. Constitutional secondary symptoms, however, generally soon appear, sometimes showing themselves even before the sore has healed where this process is protracted; generally as a mild erythema of the fauces, or a maculated or papular eruption, or roseola without any accompanying febrile attack. They are easily dispelled, as a rule, by mercurial fumigations and large doses of iodide of potassium and seldom terminate in syphilitic cachexia, unless complicated with anæmia or struma. Rheumatism is often a late result from this form of syphilis, but cachexia seldom ensues unless under the circumstances I mention.

This, I consider, is the most usual species of syphilis met with in the army, and it is in my opinion generated, not from a true primary chancre, but from secondary, or what Mr. Morgan would term modified syphilis in the female. If this view of the subject were more generally accepted, I feel sure there would be less difference of opinion as to the proper treatment (mercurial or non-mercurial) of the disease than exists at present. The treatment for true primary syphilis and its sequelæ, in their early stages, is undoubtedly mercury, with few exceptions; but, for the "modified disease", my belief is, that a modified treatment will be all-sufficient and least injurious to the constitution.

I know that many will be opposed to my statements, and will, doubtless, assert that the sores I have described were not those of infecting syphilis, and did not induce the secondary symptoms which followed, but that those symptoms and sores were preceded by a true and concealed chancre in every instance. To this, I reply that, for such to be a fact, 70 per cent. at least of the men I have treated must not only have concealed this sore, but have denied all knowledge of it when they have subsequently presented themselves voluntarily to me for treatment of the sores I have described.

The more simple and rational explanation of the matter undoubtedly is, that the prostitutes with whom the soldier cohabits are generally of the lowest grade, and cannot possibly impart to him what they have not themselves; that is, true primary syphilis, having previously been sufferers from the secondary affection for months, if not for years.

CASE IN DENTAL PRACTICE.

By ADAMS PARKER, Esq., Birmingham.

THE following case occurred in my practice some time ago; and, as the issue was of such a successful nature, I forward it for insertion in the JOURNAL.

Martha Morley, aged 14, stated that, six weeks previously to my seeing her, she had fearful pain in the first upper molar on the left side, which was followed by an offensive flavour in the mouth. Afterwards, her cheek up to the eye became very hard and lumpy; and next came a bright inflammation over the whole surface, as in erysipelas. This afterwards softened in the centre, when a great quantity of pus formed, which next effected an opening in the skin and discharged itself in great quantities, with an offensive odour. At first, the case was attended to by a druggist, until the pain and the extent of the inflammation and swelling, invading the eye, alarmed the family of her employer, and Dr. Nelson was consulted. He advised fomentations, poulticing, and a cooling aperient. This, with other treatment, was carried on until the swelling and other local symptoms had subsided; and, upon her first visit to me, I recommended the immediate removal of the tooth. This was more than two years ago, and there have been no further symptoms.

Had the tooth in the first instance been removed, the patient would have been spared a long period of suffering, and at the same time what I am afraid will remain a permanent scar in the cheek from the fistulous opening. I quote this case, not as being one of an unusual character, but to show how necessary it is in all such cases that a careful examination of the teeth should be made when symptoms so distressing present themselves.

OBSTETRIC MEMORANDA.

THE TREATMENT OF POST PARTUM HÆMORRHIAGE.

XX.

I ONLY intended to be a learner in the discussion on *post partum hæmorrhage*, until I read in the *Dublin Journal of Medical Science* that Dr. Atthill is stated to have said that the first occasion in which perchloride of iron was used in Ireland for the arrest of *post partum hæmorrhage* was, on July 11th, 1869, by Dr. Kidd. I think it right to correct this statement. I, for one, have been using it since 1862, carrying the salt in my bag, and, when occasion required (though not very particular as to quantity), dissolving about two table-spoonfuls in a washing-