ruary 21st, 1884. He had been complaining about a month of aching pain in his feet, especially the left. The pain was in the instep and ankle. He was walking on the inner side of his boot. On examination, it was found that the arch of the foot had yielded, and that the inner ankle was unduly prominent. The lower epiphysis of the fibula, as well as that of the tibia, was enlarged. The ligaments had yielded less on the right side. On treating his urine with nitric acid, a considerable quantity of albumen was precipitated. His complexion was pale, and his forehead prominent. There was considerable beading of his ribs. His throat was congested, and his tonsils large; but of his throat he made no complaint.

The second case came first on March 27th, 1884, when his urine was not examined. H. N., aged 15, a printer's boy, sought advice on account of a weak foot and ankle. The right foot had quite lost its arch, and the ankle-bones were prominent. The left foot was also flat. The wrists were slightly enlarged, but the ribs were not distinctly beaded. When he attended on April 17th, his urine was examined, and found to contain a considerable quantity of albumen.

NOTE ON CHOLECYSTOTOMY.

By LAWSON TAIT, F.R.C.S.

THE patient upon whom I first did this operation, the first successful one of its kind, and the second ever attempted, has remained in perfect health from the date of her operation, August 1879, till now. I have performed the operation thirteen times, and all of the patients have recovered. One old woman died from suffocative catarrh some weeks after the wound was healed, and another case died of cancer of the liver, that being, in all probability, the cause of the distended gall-bladder, for I found no gall-stone which I could remove. Beyond the reach of my finger there was a nodule which, at the time, I believed to be an impacted calculus, but this was not confirmed by any *post mortem* examination, and the subsequent history was that of cancer.

The remaining eleven cases are in perfect health, and the results are perfect with one exception, and that exception has taught me a great deal.

It has, in the first place, satisfied me that my much lamented friend, Dr. Marion Sims, laid down principles from which we are not likely to depart with any advantage, and that he practically perfected this operation, though he did not meet with a successful result in his own case.

Two modifications of the proceedings as advised by him have been suggested and have been put in practice, but they are not based on good reasoning, and have not been successful in practice. The first is a proposal made, I believe, by Sir Spencer Wells, to open the gall-bladder, remove the calculi, and to close it by a continuous suture without attaching it to the abdominal wall. So far as I know, this has been put in practice only once, and the result was fatal. A large quantity of bile was found in the peritoneum; and though this may not have been the cause of death, it is clearly a condition which is unlikely to contribute to success.

But the arguments against this proceeding are much stronger than the mere want of success in a single case. The gall-bladder is an organ subject to periodic filling and emptying, the latter process being accomplished by the contraction of its muscular walls, and this contraction is far more powerful than seems to be believed by any author I have consulted on this point. It also secretes an abundant quantity of clear albuminous fluid from its mucous surface, and this fluid contains—if I may make a conclusion from the few rough experiments I have made on the subject—some kind of ferment. Even if no bile enter the gall-bladder, it speedily fills with this secretion and expels it; so that, if its duct were occupied by a calculus, and a wound in its base were closed by a continuous suture, and not fastened to the abdominal wall, as recommended by Sir Spencer Wells, it is difficult to believe that such wound would remain closed.

It is a matter of extreme difficulty—in fact, I may say it is impossible during the operation of cholecystotomy—to be quite certain that all the stones are removed from the duct. This canal is distended by the passage of a calculus, urged forwards by the pressure of the secretion of mucus by the gall-bladder itself. So long as the stone is in the cystic duct, the contents of the distended gall-bladder consist entirely of this clear mucus. After the stone has passed the mouth of the liver-duct, the bile flows into the gall-bladder, its passage into the duodenum is prevented, it is reabsorbed into the system and jaundice is produced. The cystic duct, in its normal state, is of much smaller diameter than the common duct, and the agonising pain of the pas-

sage of a gall-stone seems to be limited, in great measure, to this part of its journey, for it is rare, after these severe attacks, that jaundice occurs. After mild attacks jaundice occurs sometimes, and this indicates that the stone is passing, or has passed, through the common duct.

This leads me to say that, should cholecystotomy be performed whilst a stone is in the common duct, and the gall-bladder treated as recommended by Sir Spencer Wells, it is clear that the pressure required to force the stone into the duodenum would be much greater than that required to tear open the stitched wound in the gall-bladder; extravasation of bile into the peritoneum ever afterwards would be inevitable.

Exactly the same argument is to be urged with still greater force against Langenbuch's proposal to remove the gall-bladder. The proposal is intrinsically absurd, for there can be no reason for removing any bladder merely because it has some stones in it. In many (five) of my cases the bladder was suppurating and greatly thickened, but the removal of the stones and the drainage of the bladder for a few weeks completely cured this condition. If the gall-bladder were removed at the time that a stone was lodged in the common duct, the bile must all flow, just as in the other case, into the peritoneum. I understand that Langenbuch's proceeding has been fatal in three out of six cases, where it is known to have been tried. It would have been fatal in three of my own cases if I had employed it, for in three of them stones were thus situated. In two I got the stones out, and in the third the stone is still there. Every drop of bile comes through the fistula, and not any appears to go through the intestines. The fistula is a mere pin-hole, and I have tried to close it three times, always with the result of bringing an agonising colic which lasts till the bile forces its way out through the fistula. This takes about fifty hours. It is clear I shall not succeed in this way, and I propose to open the abdomen again, about an inch to the inner side of the gall-bladder, and crush the stone *in situ* by means of padded forceps applied outside the duct. If a better plan should occur to any of my readers I should be glad to have it, and if it should be practicable and successful, its originator shall have full credit for the suggestion.

Whilst watching these interesting cases of biliary fistula, I have read much of the literature of investigations concerning the function of the bile, and I have been greatly amused to see how utterly futile experiments on animals have been in settling even the most elementary facts of the influence and the uses of the human bile. Thus I have not seen the slightest evidence to believe that either quantity or quality of food, or any drugs which were used for the legitimate treatment of these cases, as morphia, calomel, podophyllin, and rhubarb, have the slightest effect on the quantity or character of the secretion. None of the patients have suffered in any way when even the whole secretion has come through the fistula, in one case for months, save from the inconvenience of the dribbling. Indeed, in a case still under observation, the patient has positively gained in weight, and has greatly improved in health. The stools are almost milk-white, and there is not the slightest evidence of the flatulence and decomposition which is said in the text-books to be the result of biliary fistula.

The conclusion of the surgical experience in these cases is, that the entire possibilities of the treatment of gall-stone and distended gall-bladder are exhausted in Dr. Marion Sims' original paper published in this JOURNAL, that no further extension of it seems possible, and that no further experimentation, such as that of Wells and Langenbuch, seems desirable.

UNUSUAL SYMPTOMS FOLLOWING THE USE OF UNGUENTUM HYDRARGYRI AMMONIATI.¹

By W. E. GREEN, M.R.C.S.

THE following case came under my notice a few months since, and, as it was altogether unusual, I thought a few notes might be interesting to this meeting.

On July 7th, I was asked to see a German lady staying in our town, and, on arriving, was told that she was suffering from inflammation of the head. I found the patient in bed, with considerable redness and swelling about the left temple, forehead, ear, and scalp. There was no feeling of heat, and no itching or pricking sensations, but only a feeling of fullness.

The left eye was partly closed by œdema of the lids. There was a dirty white tongue, and constipation; no pain; and the pulse and temperature were normal. When questioned, the patient said that, as

¹ Read at a meeting of the Isle of Wight District of the Southern Branch of the British Medical Association.