pulling on the vagus. The question of drainage depended a great deal on the reason for operating. If there was suppuration, then drainage might be necessary; at any rate a little horsehair or catgut for the first twenty-four hours. If the glands had not broken down, and had been cleanly removed, then careful approximation of the surfaces, with careful gradation of pressure by bandaging, ought to be sufficient. Regarding the scar, all blue or infiltrated edges of the skin ought to be removed. Even if there was a large oval wound left, the skin in the neck was elastic enough to enable the wound to close. No age could be fixed as that at which operations could be most suitably done; each case must be judged on its merits. He had removed the glands in a child five months old with a good result, but only because softening was commencing. Thanks were due to Professor Allbutt and Mr. Teale for their pioneer work on this subject. Improvement had taken place in the æsthetic appearance of the scrofulous population, there being now far fewer scarred necks met with than formerly.

IX.—NOBLE SMITH, F.R.C.S. Edin.,

Surgeon All Saints Children's Hospital.

MR. NOBLE SMITH advocated a free opening and closure of the wound without using a drainage tube. In evidence that section of the sterno-mastoid would not cause wry-neck, he instanced the cases of spasmodic wry-neck in which he had ablated a piece of the spinal accessory nerve. In none of these cases had any distortion of the head occurred, and no disability in consequence of paralysis of the sterno-mastoid had taken place. The application of pressure upon the wound after operation being very desirable, he had devised an appliance of which he showed a drawing. It consisted of a metal band round the head, with processes to bring pressure upon the wound by counter-pressure upon the opposite side. He disapproved of all medicinal remedies which were made in syrups, and had for long used a neutral solution of chloride of lime made without syrup. This he had found agree with the most delicate patients.

X.—D'ARCY POWER, B.A., M.B., F.R.C.S.,

Surgeon to Out-Patients, Victoria Hospital for Children, Chelsea.

R. D'ARCY POWER drew attention to Mr. Teale's interesting case of a patient affected with tuberculous glands, who died of abdominal cancer shortly after an operation on the glands. He asked for further details, as it was generally held that cancer was rarely coincident with tubercle. Mr. Power had found that lymphadenomatous glands were usually unsuitable for removal, but that they sometimes yielded to large and increasing doses of arsenic, in conjunction with cod-liver oil.

XI.—W. G. BLACK, F.R.C.S.,

Surgeon, Hospital for Children, Newcastle-on-Tyne.

MR. BLACK considered that every case of enlarged gland in the neck should be treated on its merits, but that when the glands were undoubtedly tuberculous they should be removed. He had had many cases under his care in the Newcastle Children's Hospital, and usually resorted to removal of the glands by free incision; he objected to the method of multiple small incisions and the use of the scraper, and advocated operation by a sufficiently free incision to enable all the enlarged glands and their capsules to be removed. Where the glands were covered by the sterno-mastoid he divided this muscle, and subsequently sutured it with buried silk. Where the glands had burst after suppuration he advocated incision and removal of the diseased mass. He now very rarely used any drainage after the operation.

XII.—T. BARLOW, M.D., F.R.C.P.,

Physician University College Hospital, President of the Section.

THE President thought that Professor Allbutt and Mr. Teale ought to be gratified at the result of the discussion. The only differences of opinion concerned the *technique* of the operation, but the great outcome of the discussion was that a definite advance had been made in the treatment of this disorder by surgical methods. It was clear that the drug treatment of tuberculous glands was at a discount. Drugs

were of use for improving the general nutrition, but had little demonstrable effect on masses of caseous material. He thought the keynote of Professor Allbutt's paper was that the glandular affection was the result of peripheral irritation. It appeared to the President that the most important therapeutic indication was to improve the peripheral mucous membrane, which was primarily at fault. There was little doubt as to the right treatment of glands which were actually suppurating, but there were many borderland cases of enlarged glands in which one hesitated about immediate surgery. It would be found in some of these cases that by removing the tonsils and improving the mucous membrane of the naso-pharynx, the enlarged lymphatic glands would subside. He would urge that, especially in all town-bred children, the thorough cleansing of the naso-pharynx and the gums ought to be a matter of daily routine, and believed that thus many cases would be saved from the need of subsequent surgery. The most important practical points in the *technique* of the operation referred to the employment or otherwise of scraping and of drainage. The bearing of the question of scraping was the danger of general tuberculous infection after imperfect operations on tuberculous foci due, as we now believed, to the passage of some of the material into the general circulation.

REPLY.

MR. TEALE, in his reply, commented on the following points:

Objections to the Use of the Scraper.—Mr. Teale had never found any ill-results which he could attribute to the diffusion of tuberculous infection. Where feasible, he would undoubtedly dissect out the gland capsule wall, but there were cases in which he had thought it best to be content to scoop out the contents of the capsule, sometimes leaving a perfectly clean case; sometimes, after most careful scraping, leaving a remnant of the undestroyed portion of the gland. For such a case it was necessary to use the wire drainage tube. Time and experience would show whether or not it would be the better course in such circumstances to divide the sterno-mastoid and expose and dissect out the glands in the neighbourhood of the large vessels, or to be content with the less radical method which he had hitherto adopted.

Multiple Small Incisions.—These were especially advocated for the superficial glands, for æsthetic reasons. For glands deeply situated or matted and grouped together, large incisions were unavoidable, the size being regulated according to the surgeon's confidence in his own manipulation.

Lymphadenoma.—The sense of the meeting seemed very much to corroborate the opinion expressed, that the question was not yet ripe for settlement.

SEPTIC THROMBOSIS OF THE LATERAL SINUS :
OPERATION : RECOVERY.

By W. H. VICKERY, F.R.C.S. Eng.,

Assistant Surgeon to the Children's Hospital, Newcastle-on-Tyne.

THE case I have the honour of bringing before you appears to me to possess great interest to surgeons, because until a few years ago it would have been bracketed amongst the incurables, and the patient would have been left to die, the only loophole being a faint chance of his being strong enough to survive an attack of general pyæmia, whereas now, thanks to the advance of surgical knowledge, by timely operation a very fair prognosis may be given. I believe I am correct in saying that Professor Victor Horsley was the first to suggest the feasibility of surgical interference in cases of septic thrombosis of the lateral sinus, but the first surgeon to actually operate and publish details of the operation was Mr. Ballance of St. Thomas's Hospital. He was quickly followed by Mr. Arbuthnot Lane, who has operated on no fewer than eight cases with seven recoveries, an account of which he has given in the Section of Surgery.

History of Illness.—I was first called to the boy, aged 8, on June 9th, 1893. His history, as given me by his mother, was as follows: He had always been healthy, with the exception of slight bilious attacks. About two years ago he had an attack of measles, but it did not seem to have been severe. He had suffered from intermittent attacks of purulent discharge from the right ear, but whether these dated from the attack of

measles the mother could not say. For about a week previous to the above date he had had a discharge, which stopped on June 8th, and he then commenced to complain of earache. This had been very severe all night. His temperature was 99.2° F., pulse 90. There was puffiness over the parotid region in front of the tragus and behind the angle of the jaw. All over this it was tender on palpation, but nothing definite could be made out. The tongue was thickly covered with white fur, and the mother stated that he had been constipated, but the bowels had acted after a dose of castor oil. There was no tenderness over the mastoid and no headache. I ordered poultices over the ear and face and a cooling mixture, but for two days the symptoms remained the same; there was the same slight fever, the pain, and the foul tongue; the tenderness and puffiness over the parotid were less, but more defined. On June 12th he vomited once or twice, but a bismuth and hydrocyanic acid mixture stopped it. There was practically no alteration of symptoms except less pain, and on June 16th, as the temperature was normal, I allowed him to get up a little. He was, however, very sick about an hour later, and the next day (June 17th) he had a distinct rigor, and complained very much of pain in the neck, with stiffness. He held his head stiffly, inclining toward the right shoulder, to relax his sterno-mastoid.

He passed a very restless night, and the next morning, June 18th, had another rigor. He vomited the nourishment he took, and at my visit I found his temperature 104.6°, pulse 120. He was lying almost on his face, his head held stiffly; he complained greatly of the pain in his neck, and cried at the slightest attempt to move him. There was distinct swelling of the neck, and on palpation tender enlarged glands were felt, extending from below the pinna down to the middle of the neck along the carotid sheath. He vomited from time to time. I saw him again at 8 P.M. that night, and his temperature was 103.6°, pulse 130. He had had another severe rigor, was very restless, and had vomited several times during the day. The next morning his temperature was 103.2°, pulse 130, soft. He had had another restless night, and complained of pain over the right temporo-sphenoidal region. Vomiting continued. The question one had now to settle was, What was the precise condition of affairs, and would any surgical interference be of use? From the fact that the attack started with earache following otorrhea, that all the pain was referred to the right ear and side of neck, that the boy was showing symptoms of commencing pyæmia, and that there was absolutely nothing to account for it in the chest or abdomen, or in fact anywhere else in the body, it seemed to me I was justified in diagnosing septic thrombosis of the right lateral sinus; and, if so, no time should be lost in operating. The symptoms were not those of cerebral abscess, which was the alternative diagnosis which presented itself. At the request of the friends Mr. Rutherford Morison saw the boy with me. He agreed entirely with my diagnosis.

Operation.—I operated at 4.30 P.M. on June 19th. The parts being rendered aseptic, I made a three-inch incision along the anterior border of the sterno-mastoid, the centre of the incision being at the level of the cricoid, and exposed the internal jugular vein, shelling out some inflamed glands on the way. No thrombosis was found, but the blood stream was apparently very sluggish. A ligature was placed round the vessel at the lower end of the wound, when the vein immediately collapsed. This clearly pointed to blocking of the circulation on the cerebral side, and I decided to explore the lateral sinus. A semicircular flap was dissected down and the trephine applied, the centre of the trephine opening being over the posterior inferior angle of the parietal bone. The sinus was seen to contain fluid, but as it had a yellowish appearance as if it might contain pus I made a free incision into it. If there was any pus it came with the first rush of blood. The free hæmorrhage which ensued was immediately stopped by a pad of iodoform gauze, and then uniting the flap over the pad, tying the first half of the ordinary surgeon's knot and leaving the ends long. This completely controlled the hæmorrhage. The neck wound was then sutured and dressed.

After-History.—At 9 P.M., his temperature was 102°, pulse 120. He was sensible and complained of thirst; his condition was good. He had rather a restless night, but slept at intervals. In the morning (June 20th) the temperature was 97.6, pulse 104, soft, but regular. He had slight pain in the neck and head. No rigors or sickness had occurred, but he was rather irritable. At 6.30 P.M. he had a rigor lasting ten minutes, and was said to be rather blue after. He vomited, and was also purged. At 7.30 P.M., temperature 103.2°, pulse 130, very restless, crying with thirst. Circulation good, and no cyanosis. He was ordered calomel grs. iv and a mixture containing bromide of potassium, chloral, and antipyrin. At midnight his temperature was 99.2, pulse 112, feeble but regular. He had taken some milk and iced water, and had had no more rigors or attacks of vomiting. The next morning, June 21st, his temperature was normal, pulse 120, feeble. He had slept quietly from 1 A.M. to 7 A.M. He looked fairly well, but complained for the first time of pain in the left hand. I found on examination a tender swelling on the palmar surface of the first phalanx of the middle finger, extending on to the palm. No fluctuation was then apparent. At 1 P.M. he had a severe rigor lasting 40 minutes, during which his bowels were opened loosely, and he vomited a good deal. He complained of nothing but thirst, and seemed exhausted after the rigor was over. At 10 P.M. his temperature was normal and pulse stronger. He had had a quiet afternoon and evening, had taken his food well, and expressed himself as feeling much better. The pain in his hand had been relieved with poultices. He had a good night, and at 11 A.M., June 22nd, his temperature was 99.2°, pulse 120, fair. The hand was more swollen and very painful. Slight enlargement of axillary glands was noticed. At 8 P.M. the temperature was 100.4°, and the pulse 126. He had passed a good day, but his hand was more swollen, and fluctuation distinct. The next day the temperature was normal. He had been very restless the previous night until midnight. Then he slept well until the morning. Under chloroform I dressed his wounds, and the drainage tube was removed from the neck. There was no pus, but the edges of the wound looked rather red and irritable around the tube. In the scalp I loosened the stitches that were left partially tied, removed the iodoform gauze, and then secured the stitches permanently. There was no hæmorrhage. After rendering the left hand aseptic I made a free incision, letting out about a drachm of thick laudable pus. At 7 P.M. he had a slight rigor, and complained of pain about the scalp wound. Pain in the hand and axilla was quite

relieved. On June 24th the temperature was normal; the pulse 108, stronger. The wound in the hand was discharging slightly. At 8 P.M. he had another slight rigor, and vomited some curdled milk. On June 25th, the temperature 99.6°, and the pulse 118. He had slept well, and taken a quantity of nourishment. From this time his progress was rapid. He had a good appetite, slept well, and expressed himself as feeling well. He has gained flesh considerably, and, but for a certain amount of pallor, has looked better than his friends have ever seen him. The only drawback has been that the lower inch of neck wound has been covered with an exuberant mass of granulations, which, even with the almost daily application of nitrate of silver, has only just been removed.

The explanation of the case seems to me to be that we started with a septic thrombosis of the lateral sinus, but that before I operated a certain amount of the *materies morbi* must have reached the general circulation, causing the palmar abscess and the rigors subsequently to the operation. I think it is fair to conclude that had I operated earlier the recovery would have been as rapid as in the cases related by Mr. Lane; and, on the other hand, had no operation been attempted, a larger amount of septic material would have been poured into the general circulation, and the boy would probably have died of general pyæmia.

The lad is here for inspection, and I think it will be agreed that he shows very little the effects of the serious illness he has survived.

Mr. HOWARD MARSH mentioned a case in which, in a child of 5, he had lately adopted the form of treatment described by Mr. Vickery. Suppuration of the mastoid antrum had followed chronic disease of the middle ear. The child's temperature was 104°. Two days before the mastoid antrum had been opened fœtid pus had been evacuated and the lateral sinus exposed and found to be apparently blocked. As the operation was followed by no improvement, and as he had symptoms of purulent absorption, the internal jugular was exposed. During this proceeding some large glands in the neck were brought into view. The vein was tied, and divided a little above the ligature. The upper end of the vein did not bleed, showing that the sinus was blocked. The sinus was then cleared out as far as possible. The child's condition, however, was not materially improved, for extensive blood poisoning had evidently occurred, and this threatened to be fatal.

THE CAUSATION AND TREATMENT OF HYDROCELE AND HERNIA IN YOUNG INFANTS.

Read in the Section of Diseases of Children at the Annual Meeting of the British Medical Association held in Newcastle-on-Tyne August, 1893.

By W. ARBUTHNOT LANE, M.S.,

Assistant Surgeon to Guy's Hospital and to the Hospital for Sick Children, Great Ormond Street.

I PROPOSE in this short communication to call attention to what I believe to be the most common cause of hernia and hydrocele in young infants, and I do this because I find that few, if any, authorities writing on hernia or hydrocele occurring at this period of life lay any stress whatever upon it as a cause, if they even regard it as a predisposing factor at all.

Flatulence, which is often considerable, causes first a yielding of the umbilical cicatrix, with the formation of the protrusion of skin filled with bowel or fluid with which we are only too familiar. I would like to say a few words about the presence of fluid in the peritoneal cavity of the infant which is suffering from the results of bad feeding. I have observed in operating on hernia in such cases that a variable, but distinct, quantity of serous fluid existed, while in operating on the abdominal cavity of a child which was supplied with suitable food at proper intervals I have not noticed any fluid present. How far a certain amount of serous fluid is normal to the healthy peritoneal cavity of the infant, and how much is due to the irritation resulting from chronic indigestion, I cannot say with certainty. Arguing from analogy with the more commonly observed conditions in the adult would strengthen the opinion that irritation and distension of the intestinal canal of any duration is accompanied by more or less serous effusion, and this is more likely to be the case in the young infant than in the adult.

As time goes on, the same increased intra-abdominal ten-