out any associated fracture or displacement of the ribs. This fact is, unquestionably, to be explained by the greater elasticity of the thoracic wall in the child than in the adult, and the greater tendency to laceration of the lung-structure. The following case will, perhaps, best illustrate its truth.

CASE. A boy, aged 7 years, when playing in the road, was knocked down by the shaft of a cart; the wheel caught him by the left side of the lower part of his abdomen, and turned him round, stopping when just about to pass over the thorax. Intense dyspnoea and severe hæmoptysis immediately resulted, and he was brought to Guy's. He was admitted under the care of Mr. Birkett; and, as I happened to be at the hospital at that time, I saw him, and noted the following facts. He was in bed, lying on his right side, half turned over on to his abdomen, with his hips drawn up and flexed. There was intense dyspnoea and cough, accompanied with hæmoptysis. He was quite collapsed, and nearly unconscious; and no indication of fractured ribs could be detected. He never rallied, but died two hours after the accident.

At the *post mortem* examination, the only external sign of injury was a bruise on the left side of the back. There was no fracture of the ribs, or any external indication of injury to the thorax. The right chest was filled with air and some ounces of blood, which had evidently proceeded from a laceration, about three inches long, of the lower edge of the middle lobe of the right lung. The lung was partially collapsed. In the abdominal cavity were a few ounces of blood, from a laceration of the upper edge of the liver. There was also effused blood about the left kidney, from laceration of the suprarenal capsules.

REMARKS. In this case, I think, there can be little doubt that the laceration of the lung was due to the injury; and, as it was not complicated with any fracture of the ribs, it must have been produced by a yielding of the bony and cartilaginous coverings, and a dragging of the lung from its fixed attachments. This is a point of considerable interest, and, not being common, is worthy of record. It is mentioned in this place as a principal point of difference between the thoracic injuries of young and adult life, and is the only one to which I will now draw attention.

Fractures of the ribs in children, like the same injury in adult life, are to be treated by strapping, and not by bandages; bands from one to one-and-a-half inch wide being fixed from the spine to the sternum round the injured side, including three ribs above and three below the seat of fracture. It must be remarked, however, that fractured ribs in young people are very rare; their natural elasticity, doubtless, being quite sufficient to explain the fact.

[To be continued.]

CHEMICAL SOCIETY. Arrangements have been made for the delivery of the following lectures respectively at the next three meetings of the Chemical Society:—May 7, Dr. Lyon Playfair, C.B., F.R.S., "On the Constitution of Salts;" May 21, W. R. Grove, Esq., Q.C., F.R.S., "On Certain effects of Intense Heat on Fluids;" June 4, M. Marcellin Berthelot, "On Synthetic Methods in Organic Chemistry."

Original Communications.

ON CONGENITAL PHIMOSIS: WITH A SIMPLE OPERATION FOR ITS RELIEF.

By FURNEAUX JORDAN, Professor of Descriptive and Surgical Anatomy, Queen's College; Assistant-Surgeon to Queen's Hospital; and Senior Surgeon to the Eye and Ear Hospital, Birmingham.

Cases of phimosis are conveniently classified under two heads—the *congenital* and the *contingent*.

The congenital variety is the more important; because, being permanent, it produces a greater abundance of evil consequences. Contingent phimosis is not only temporary, but is itself merely a symptom of other prior disease; and the clearly recognised principles of its treatment belong to the remedial surgery of the diseases of which it is a secondary phenomenon.

The effects of congenital phimosis are local and general. Locally, there may be inflammation—pain, tenderness, swelling, suppuration, ulceration, or sloughing, or adhesions; impeded urinary flow, or retention of urine (I have found retention of urine in phimosis, and also in urethral disease, without complete physical obstruction—is this due to so-called reflex action?); retained sebaceous secretion, which itself frequently causes much irritation and inflammation. Preputial calculus is occasionally met with. In cases of tight phimosis which remains unrelieved, I am convinced, from a lengthened series of observations, that atrophy of the penis is an undoubted result. It is commonly supposed also that phimotic stricture favours the accession of epithelioma in the penis. The presence of phimosis in acquired disease constitutes a very unfavourable complication. The treatment, however, when an operation is required, is simple; an incision through the whole length of the prepuce (or its complete removal when in a sloughing state) is the only measure capable of relieving phimosis when the skin and lining membrane of the prepuce are unable to glide over each other, from the presence of inflammatory products between them.

Very frequently the effects of phimosis are not local merely, but affect other organs, or even impair the general health. In these cases, the flow of urine is impeded. A tight phimosis may produce all the symptoms which follow stricture of the urethra. Indeed, I have seen, more than once, the act of micturition performed with more difficulty in congenital phimosis than is seen in ordinary cases of stricture—the prepuce being distended into a large globe at the end of the penis. Not only may there be lesion of the bladder, ureters, and kidneys, but obscure pains in distant parts may perplex the patient and his medical attendant. I was requested by a physician of great eminence in his profession to operate for a congenital phimosis in the son of a clergyman, where there were cystitis and extreme vesical irritability, and also severe inflammation of the tonsils and pharynx, with quite disproportionate pain in the throat. All the symptoms, which had caused distress for a considerable period, quickly disappeared with the removal of the phimosis. I have seen, in the large number of cases of urethral stricture which have been placed under my care, inexplicable pains in the throat vanish with dilatation of the stricture. But the anomalous symptoms of stricture may on another occasion fitly form the subject of a lengthened paper.

The seat of constriction in phimosis lies *chiefly* in the lining of the prepuce, and *partly* in the skin, and in both tissues near the preputial orifice; the skin at this

spot probably participating in the characters of the lining membrane.

The operation for congenital phimosis, which I described very briefly seven years ago in the *Medical Times and Gazette*, has been performed frequently since then by myself, and by several other surgeons, with unvarying success. It is a significant circumstance, that neither I nor any surgeon with whom I have communicated have ever found a prepuce that was too long after the efficient removal of the phimosis by the operation which I am about to describe.

The principle of the operation which I practise is this. An incision is made in the long axis of the penis, on each side of the preputial orifice, which divides a small portion of skin and a larger portion of lining membrane. The incisions, when the prepuce is retracted, assume a linear form at right angles to the direction in which they were made.

The details of the operation are these. One blade of a pair of small round-pointed scissors (Critchett's scissors for the subconjunctival operation for strabismus answer admirably) having been passed through the preputial orifice, both skin and lining membrane are divided to the extent of a quarter of an inch. The incision is made first on one side, and then precisely in the same manner on the other. The prepuce is now retracted as far as the incisions will permit. This proceeding brings more lining membrane into view between the lips of the wound. As much of the lining membrane as is thus exposed is divided by a second incision on each side. The operation is now complete, and the prepuce may be easily retracted. The incisions, which were made in the long axis of the penis, after retraction of the prepuce become linear in a vertical direction, and almost imperceptible in the circular folds of the retracted foreskin. In the after treatment, the prepuce should be kept back or frequently retracted. In children, an able medical friend considers occasional retraction (say once daily for a week or ten days, until the wounds have perfectly healed) to be sufficient.

The extent of the incisions may be a little less in children and in slight cases, and a little greater in adults and in severe cases. The scissors must be small. I have several times, where there has been retention of urine, found the introduction of a small probe a proceeding of some difficulty.

Fig. 1.—First incision. (In this and the next cut the flat side of the scissors is too clearly represented.)

Fig. 2.—Second and last incision. (The wound made by the first incision is not sufficiently large in the figure.)

Fig. 3.—Direction of the wound after retraction.

The operation just described possesses the double

merit of dividing the constricted parts completely, and the constricted parts only. Considerable experience justifies me in claiming for the operation the following advantages. The wounds, being small, heal rapidly. No ligatures are required, and no sutures; no assistants, and no instruments, save the small scissors. Not an hour's confinement to bed or home is required. This great advantage was well seen in the case of a naval officer who had acquainted himself with the nature of all the operations for phimosis, mine included, in the library of the assistant-surgeon of Her Majesty's ship *H*. He travelled from Plymouth to put himself under my care. I operated on his first visit to my rooms. He immediately walked to his hotel with ease, and walked out several times during a stay of two days in Birmingham. On the third day, he travelled to Plymouth with perfect comfort.

Lastly, the relief is complete and permanent. There is no deformity; and the cicatrices are found with difficulty, and only by means of a good light.

SOME ACCOUNT OF THE OPERATIONS PRACTISED IN THE NINETEENTH CENTURY FOR THE RELIEF OF TENSION OF THE EYEBALL, GLAUCOMA, ETC.

By J. VOSE SOLOMON, F.R.C.S., Surgeon to the Birmingham and Midland Eye Hospital.

[Read before the Midland Medical Society, February 3rd, 1863.]

THE earliest notice of section of the ciliary structures* for the relief of intraocular tension is found in the *London Medical and Physical Journal* for the year 1802 (vol. vii, p. 209). Dr. Whyte there states, in a most interesting and ably written paper, that in cases of enlargement of the anterior hemispheres of the eye, occurring in Europeans, in consequence of incautious exposure of the eye to a tropical sun, whether complicated by congestion of the choroid veins ("dilated veins of the albuginea") or not, he had derived great advantage by puncturing the eyeball with a couching-needle. His incision was made through the sclerótica into the posterior aqueous chamber, the instrument being carried "behind and parallel to the iris". He directs, "the outlet" (incision) should be "proportioned to the existent expansion"; and states that by this procedure he had

extracted cataracts, ever without accident, and often with success. From this statement, I conclude the instrument used by Whyte was a broad cutting-needle. (*Vide* Diagram a.) The following parts would be divided by such an incision: the conjunctiva, sclerótica, radial fibres of the ciliary muscle and ciliary processes. The accidents which I should apprehend from this operation are, traumatic cataract, prolapse of the iris, and a trouble-

* The terms ciliary structures, section or division of the ciliary structures, are used throughout this paper for convenience of expression, and not because they are found in the papers or works under review.