jection, the internal sphincter must have been stretched considerably. Its situation is presumably at or just distal to the ledge or shelf forming the separation between the two cavities. If this presumption is right, the internal sphincter could not have had any effect in controlling the urine, and it must be supposed that a man can have normal micturition without an efficient internal vesical sphincter.

A DANGER IN ELEVATING THE LOWER THIRD MOLAR.

By F. St. J. STEADMAN, D.P.H., M.R.C.S.,
L.R.C.P., L.D.S.ENG.

DENTAL SURGEON, METROPOLITAN HOSPITAL, ETC.

THOUGH cases of the nature here reported may not occur frequently in the experience of any one medical practitioner, they are attended by considerable risk of serious consequences, and I have therefore deemed it my duty to place these notes on record.

About two years ago a young woman, aged 24, came to me complaining of pain round the angle of the mandible on the right side. She was found to have a badly impacted third molar. This tooth was lying with its long axis practically at right angles to and close up against the adjacent second molar, only a small portion of the posterior cusps being visible. The tissues round about were slightly inflamed. Externally there was slight, but nevertheless distinct, swelling. Most fortunately, in the light of subsequent events, there was no trismus. Immediate removal of the offending tooth was decided upon. The patient was placed under gas. Not much difficulty was experienced in displacing the tooth from its bony socket with the straight elevator, but the gum behind the tooth not only failed to stretch to allow the tooth to be completely removed, but it was very loosely attached to the bone; consequently the tooth became lodged on the bone but underneath the gum. Just at this critical moment, while I was disengaging the elevator to make an incision through this piece of gum, the patient commenced to struggle as she was beginning to recover from the anaesthetic, and my elevator accidentally gave the tooth an inward push, causing it, to my great surprise, to disappear. Knowing that the tooth was too much entangled in the gum for it to have become suddenly free and so swallowed, I realized at once that it must be somewhere in the tissues of the neck. I found it about one inch below the angle of the jaw. It could be distinctly and easily felt beneath the skin, and, indeed, picked up with it. I immediately asked the anaesthetist to reapply the face-piece, and while the patient was again being anaesthetized I had an opportunity to think over my next course of procedure. It was obvious I had three courses open to me: (1) To attempt to bring the tooth back the way it had gone; (2) to make an incision over it through the skin and so remove it by that route; or (3) to leave it where it was for the time being. Seeing that the tooth had passed along the inner side of the bone, and that as the deep cervical fascia is attached along its lower border it must be lying deep to this, and that therefore the danger of setting up Ludwig's angina must be great if I left the tooth where it lay, I decided that I must at all costs remove it. I determined to attempt the first course, and failing this to proceed at once with the second. Upon the removal of the face-piece I made an incision about an inch long through the piece of gum which had caused the trouble, with a pair of blunt-pointed scissors. I then passed the first and middle fingers of my left hand into the mouth and placed my right hand over the tooth, on the outside. By pressing fairly forcibly down with my left hand I managed after a little trouble to get the fingers of both hands below the tooth. It was then found to be easy to work the tooth upwards along the path it had travelled until it lay on the inner plate of the angle of the bone. Then, by pressing it against the bone, I managed to work it through my incision into the mouth. These manipulations had to be carried out quickly, because during them my left hand was pressing the tongue forcibly backwards, causing the patient to become cyanosed. Beyond prescribing a mouthwash, no special after-treatment was adopted, and the wound healed well.

Looking back, it is clear that the incision which I subsequently had to make should have been made at first. In this case it could easily have been done because there was no trismus, but where this condition is present in a marked degree it might be extremely difficult.

H.M.S. *Medina* has been fitted with Berkefeld pressure filters for the purification of the drinking water during their Majesties' voyage to India.

ON November 16th the Princess Louise, Duchess of Argyll, opened the new Out-patient Department of the Paddington Green Children's Hospital. The extension has cost £11,000, towards which the Committee of King Edward's Hospital Fund for London had contributed £2,250.

A NOTE ON SPRENGEL'S DEFORMITY.*

BY

ALEX. MITCHELL, M.A., M.Ch.,

ASSISTANT SURGEON, ABERDEEN ROYAL HOSPITAL FOR SICK CHILDREN.

THE condition of congenital elevation of the scapula, known as Sprengel's deformity, and defined as "a congenital deformity consisting in an upward elevation of the scapula in its relation to the thorax and to the scapula of the other side," seems to be rare enough to justify the publication of the following case.

M. B., female, aged 6 years, was sent to hospital by Dr. Milne, of Torry, on November 11th, 1910.

History.

No point bearing on the case was made out from the family history. The birth was said to have been difficult, necessitating the presence of two medical men and the use of forceps. Soon after birth it was noted that the child would not use its left arm freely, and that the shoulder on that side seemed to be high as compared with the other one.

Condition on Admission.

The patient is a well nourished, healthy child, and is very intelligent. The left shoulder is distinctly higher than the right one. The clavicle is shorter, and the arm is in every measurement smaller. Flexion at the elbow is almost complete, but extension is limited—about 135 degrees. At the shoulder she cannot raise the affected arm above the horizontal position.

Measurements show that on the affected side shortening is present to the extent of $\frac{1}{4}$ in. in the clavicle, $\frac{1}{2}$ in. in the upper arm, $\frac{1}{4}$ in. in the forearm (radial side), $\frac{1}{2}$ in. in the glove measurement of the hand.

The angle of the scapula is $1\frac{1}{2}$ in. higher from the iliac crest, and $\frac{3}{4}$ in. further from the mid line. The scapula itself is distinctly smaller, the measurement from spine to angle being $\frac{1}{2}$ in. less than on the right side. The spine is unduly prominent, but no actual bony exostosis is present. There is a slight degree of scoliosis, convex towards the affected side.

Skigrams confirm the abnormal size and position of the scapula, and show that there is no evidence of dislocation or any sign of old injury about the humerus or the scapula.

The second and third left toes are "webbed," but skigrams do not show any bony abnormality here.

While it is important to remember that primary high scapula must be distinguished from the high shoulder got along with torticollis and advanced scoliosis, it would appear that other congenital defects are frequently found along with this deformity. No electrical responses were obtained over the lower part of the left trapezius muscle. Otherwise the electrical reactions were normal.

That this condition is a rare one is shown by the fact that up till 1906 only 99 cases had been put on record; 47 of these showed a right-sided, 36 a left-sided deformity; in 11 cases both sides were elevated. Particulars as to the other 5 cases seem to be wanting.

Since our case was shown, 4 cases have been put on record by Mr. Greig of Dundee—2 left and 2 right-sided. Three definite varieties of the deformity are described:

1. In which there is a bridge of bone connecting the scapula with the vertebral column.
2. A long piece of bone projects from the upper border of the scapula, but does not articulate with the spine.
3. The scapula shows no bony outgrowth.

The last type is by far the most common, and, as pointed out by Greig, it is questionable if those cases in which the scapula is connected with the spinal column by a bony outgrowth should be classed as "primary congenital elevation of the scapula."

With regard to the etiology of the condition various views have been put forward. That it is due to a constrained position of the fetus, as in two of Sprengel's cases, in which the arm appeared to have been fixed *in utero* behind the back of the child. Such a condition as this may be associated with deficiency of liquor amnii.

Trauma during labour has been regarded by some as a likely cause.

According to Chievitz the condition is explained as being caused by interference by pressure with the descent of the upper extremity, which is, in its origin, a cervical appendage. It must also be remembered that in several cases muscular reactions have been found wanting or defective in certain parts, especially over the lower part of the trapezius, which would suggest a primary muscular defect as the cause of the deformity.

While it must be admitted that the cause of this condition is uncertain, it seems not unlikely that undue force used during delivery in the rectification of abnormal arm positions may be an important factor in the production of Sprengel's deformity. When we come to consider the question of treatment, very little is to be found in the literature of the subject. Whitman states that, if the contraction of the vertebro-scapular muscles is extreme in a young patient, the shortened tissues should be divided by open incision, and if the scapula is joined to the spine, the bony process should be removed.

In the present case an incision was made between the spine and the scapula and any resistant tissue present was freely divided. On examining the case six months after, one could not honestly say that any improvement had resulted from the operation.

In conclusion, I wish to express my sincere thanks to Mr. H. M. W. Gray, surgeon to the hospital, for his courtesy in permitting me to put this case on record.

BIBLIOGRAPHY.

Edinburgh Medical Journal, March, 1911. Keen's *Surgery*, vol. ii. Whitman's *Orthopedic Surgery*, third edition. Young's *Manual and Atlas of Orthopedic Surgery*.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF SPRENGEL'S DEFORMITY.

THE condition shown in the accompanying photographs is, I presume, what is known as congenital elevation of the shoulder, or Sprengel's shoulder.

The previous history is unknown, the boy (aged 12 years) being in an orphan home. The left scapula is drawn upwards and towards the spine; with the arms at rest hanging by the side, the angle of the left is $1\frac{1}{2}$ in. higher than that of the right scapula, and is 2 in. from the middle line, the angle of the right being $2\frac{1}{2}$ in. On elevation of the arms above the head the angle of the right moves through $2\frac{1}{2}$ in., being 5 in. away from the mid line; the left moves through $1\frac{1}{2}$ in., thus being only $3\frac{1}{2}$ in. from the

mid line. This probably accounts for the fact that the boy cannot abduct the left arm through more than about 135 degrees.

With the arms hanging down there is practically no difference in the height of the point of the two shoulders; but as soon as abduction takes place this is altered, and, with the full limit of abduction, the outer end of the clavicle is almost vertical. From angle to coracoid process the left scapula measures $\frac{1}{2}$ in. less than the right. There are no irregularities of the bone to be felt, and it is not winged.

The condition can be explained by a shortening of the fibres of the trapezius; the levator anguli scapulae is probably also involved, at any rate, secondarily.

Would the lessened function of the left arm account for the smaller size of the scapula?

Great Yarmouth.

H.W. HARDING, M.D.Lond., D.P.H.

A PELVIC SEPTIC CONDITION DUE TO BACILLUS COLI.

THE following notes of the case of a lady who came under my care at Easter of this year are, I think, worth

recording. So many anxieties and difficulties were experienced, and the ultimate results so very encouraging, that I trust that some other country practitioners, like myself living in out-of-the-way corners, may find a use in their perusal.

I was called at 4 a.m. one day to see a visitor to this town. I found her suffering from severe abdominal pain of an intermittent character. So great was her pain that she could not help screaming. The symptoms resembled those due to uterine contractions. Pregnancy by the patient was not considered to be possible, as for the last two weeks or more she had been menstruating. Temperature 100° F., pulse-rate 110. Relief by means of morphine was obtained for a few hours. The pains kept recurring. A vaginal examination showed a fetid grumous bloody discharge coming from the uterus. The os was soft, but would not admit the forefinger. The temperature twelve hours after first seeing the case was 103° F., pulse 120, respirations 30. Inquiry revealed an immediate past history of dysentery and colitis contracted in India. The bowels were acting very frequently, and there was much mucus, and occasionally blood, in the stools. After about forty-eight hours a mass was discharged from the uterus. The examination of this left no doubt that a miscarriage of a very early pregnancy had taken place. The general condition of the patient did not improve in the next twelve hours. The pain continued in the abdomen. The pulse-rate was increasing, and the temperature, although erratic, touched 102° F. Under an anaesthetic the uterus, after dilatation of the cervix, was curetted and thoroughly washed out. A very foul uterine debris was removed. The general condition after this improved a good deal; the temperature and pulse-rate came down, but the abdominal pain remained, and was at times very severe. Diarrhoea, the evacuations being very offensive with some blood and much mucus present, was frequent. The third day after the curetting the symptoms became worse. Temperature, pulse-rate, and condition of tongue were all on the downward grade. The uterine discharge was becoming markedly offensive. Under an anaesthetic the uterus was again thoroughly cleansed; 30 c.cm. of Burroughs and Wellcome's antistreptococcal serum was injected into the buttock. This was repeated in twenty-four hours in 10 c.cm. doses. An intrauterine douche was given twice daily. The temperature, taken four-hourly, fluctuated between 100° and 101° F. Matters went on in much the same way for ten days, when again the temperature at times registered 103° F. The streptococci injections were now repeated daily for ten days in 10 c.cm. doses without any marked result. A cultivation was now made from the bacilli found in the mucous discharge and stools, by the Clinical Research Association, and 500 million of this special vaccine was administered for two days in succession, and then 100 million on alternate days for four injections, with good results, all symptoms improving, and especially those of the colitis. Just as we had reason to hope that all danger was past, and about fourteen days from the last vaccine injection, the temperature began to be very irregular, and much continual pain and some tenderness was complained of in the lower part of the abdomen. With alarming rapidity a rounded swelling appeared above the pubes, which was evidently uterine. The uterus became fixed, and Douglas's pouch became full. It was evident that acute cellulitis around the uterus had set in. As days went by the cervix uteri was pushed away from the middle line to the left, and the fundus was correspondingly displaced to the left of the middle abdominal line. The swelling became more tense in the posterior vaginal fornix. A pair of long forceps was pushed through into this swelling, and a very fetid pus was evacuated. From this discharge, through the medium of the Clinical Research Association, a vaccine was obtained of "a Gram-negative motile bacillus, which has been frequently isolated in cases of colitis." Injections were given daily of 10 million of this vaccine for four days, and then every other day for four days. Careful vaginal irrigation was carried out twice daily, and the opening into Douglas's pouch was kept open by passing blunt forceps through the site of the discharge. Under this treatment a very gradual improvement was seen. The temperature for some weeks never rose above 100° F., and was frequently subnormal. A very marked change for the better as to the colour of the skin of the face was soon seen. The