full term. The patient was attended by Mr. W. H. F. Oxley, of Poplar, to whom I am indebted for the following report of the labour:

Mrs. — sent for me first on August 10th. She was then having pains about every ten minutes, and the os was of the size of a shilling, the vertex presenting in the occipito-posterior position. The membranes were very thin and ruptured after the first examination. There was very little liquor amnii.

The pains continued fairly strong, about every five minutes during the next three days. A sedative draught each evening gave relief for about a couple of hours.

On the 13th I was able, though with great difficulty, to introduce the forceps under chloroform through the os, which was then not much larger than half a crown.

There was no trouble in extraction. I think that the age of the patient, coupled with the early rupture of the membranes and the position of the head, was sufficient to account for the slow dilatation of the os, and I do not think that the operation had any effect whatever upon the course of labour.

The uterus contracted well after extraction.* There was no pelvic deformity.

On September 14th the patient came to see me at the Samaritan Hospital, bringing her infant, a healthy female child. She had suckled it for about a week, but it did not thrive until it was fed artificially.

The patient herself was in very good health. The abdominal wound had healed well, and was deeply pigmented along its entire course†. The uterus could be freely moved, involution was perfect, and the fornices were quite free. I failed to detect anything abnormal in the posterior part of the inferior segment of the uterus, the seat of the myomectomy. The cervix was slightly lacerated on the left side of the os; the perineum was entire.

MYOMECTOMY AND ELDERLY PRIMIPARAE.

The patient was 35 years of age, and carried the child to term. The first stage was long; but, as I have explained, there is no evidence that the delay was due to the operation. The child was saved and reared.

Recently published reports show that, as in my case, the gravid uterus in an elderly subject pregnant for the first time tolerates myomectomy. Thring, of Sydney,¹ enucleated a necrotic interstitial fibroid, of the size of a large orange, from the anterior wall of the uterus of a woman aged 38, in the sixth month of her first pregnancy. "At one point the mucous membrane lining the uterine cavity was exposed." Yet the patient was delivered spontaneously of a healthy living child at full term. On the other hand, a woman, aged 40, underwent myomectomy at the end of the sixth month of her first pregnancy, but aborted thirty-six hours after the operation. In this instance, however, the operation was severe, as the fibroid, enucleated through an incision made in the fundus and anterior surface of the uterus, was "about equal in size to an ostrich's egg." The fetus, placenta, and membranes came away easily, but the uterus did not contract well and the temperature rose. After the use of the curette on the fifth day the patient recovered.

Dr. Joseph Stewart, of Leeds,² recently operated on a woman aged 35 in the sixth month of her first pregnancy. There had been symptoms simulating axial rotation of an ovarian cyst. He enucleated a large sessile fibroid attached to the left of the fundus, rotating the gravid uterus somewhat towards the right. A large gap was left not easily closed. According to the published report, "the patient was delivered of a boy at full term."

Dr. Stewart has kindly sent me fuller details of the labour. It ended spontaneously in six hours and a half; the head was in the first position, and the liquor amnii seemed normal in amount. There was no difficulty about the expulsion of the placenta.

I was chiefly interested in the contractions of the uterus; they were normal so far as I could make out. I could discover no indentations representing the spot from which the tumour had been enucleated.

A general survey of current opinions and experience relating to the treatment of fibroids during pregnancy lies beyond the limits of this brief communication. I may refer the reader to Dr. Amand Routh's³ recently published lecture on the subject; and to Tuffier and de Rouville's memoir,⁴ read and discussed at the Lisbon meeting of the

International Medical Congress. References to earlier writings about myomectomy in pregnancy will be found in a report of a case in my own practice, where the patient was a primipara 28 years of age.⁵ I removed, during the second month, a sessile fibroid over 2 lb. in weight from the back and fundus of the uterus. Labour took place at term, and was lingering on account of breech presentation and hydramnion; but the child was saved and reared. I mention this case because the age (28) is beyond the average for primiparae in the United Kingdom. The great excess of liquor amnii in this instance of labour after myomectomy is worth noting, as in the case which I have reported above in full it was very deficient. The relation of the excess or deficiency to the operation is not evident.

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CONGENITAL LARYNGEAL STRIDOR.

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DISCUSSION on the nature of this interesting affection has generally revealed a difference of opinion upon two points, namely, the appearance of the larynx and the mechanism of the stridor. This want of agreement is due to the difficulties of laryngoscopic examination in children, which are so increased in this affection by the great excursion of the larynx that trustworthy observation is well-nigh impossible. It is true that with a laryngeal mirror one may recognize during the early stage of inspiration a curved epiglottis, with its lateral margins touching and the aryepiglottic folds lying so close as to leave only a small intervening slit; further observation is, however, prevented by the rapid descent of the larynx, and we are left to conjecture what is happening. In these circumstances the direct method of examination becomes of great value, and indeed the only possible means of accurate investigation, and the purpose of this short paper is to place on record some observations thus made on five children within the last two years.

The cases, whose ages varied from 8 months to 2 years, were of the classical type so well described by Thomson.¹ Examination took place under chloroform by means of the Killian tube-spatula, with the parts about the pharynx and larynx well cocaineized. The influence of irregular and convulsive action of the respiratory muscles as a factor was eliminated, for, in all, stridor became more marked the deeper the anaesthesia. On the other hand, it varied notably with the position of the patient, being most evident in the dorsal posture, distinctly less on the side and with the tongue pulled out, whilst it was very definitely relieved by placing the tube-spatula on the base of the tongue and tilting it forwards.

On passing the tube-spatula the curving of the epiglottis was noted in varying degree and the approximation of the aryepiglottic folds, but the most striking appearance was the extraordinary excursion of the posterior wall of the larynx. With each inspiration the soft parts on the cricoid, including the arytenoids and the interarytenoid fold, disappeared, so to speak, into the interior of the larynx, being drawn downwards and forwards, and to such an extent in pronounced cases that the upper border of the cricoid could be seen as a transverse ridge through the stretched mucous membrane. The accompanying diagrams (Figs. 1 and 2) show this change in position of the posterior wall. It was this movement which produced the stridor. With the aryepiglottic folds coming into close apposition during inspiration, the passage of air was only possible by the downward and forward displacement of the posterior wall through suction, and it was the vibration of this section of the laryngeal entrance which gave rise to the noisy stridor. This was confirmed when

* There was no post-partum haemorrhage.

† On March 29th, the day of her discharge from the hospital, I observed slight pigmentation around the suture tracks.

the posterior wall was held back by means of a curved probe and the air passed in easily and without stridor. If a short tracheal tube (child's size) were inserted just within the entrance of the larynx, all noise at once ceased, the glottis appearing quite normal, and showing no sign of spasm or paralysis of the vocal cords. Pushing the tube further, the trachea was found unaffected in all, and there was no encroachment on its lumen, so that the influence of an enlarged thymus must be regarded as accidental and no part of the classical affection.

With expiration the parts resumed their natural upright position, and at the end of that act the larynx had the

Fig. 1.—To show upright position of posterior wall, in normal larynx.

Fig. 2.—To show folding for-wards and downwards of posterior wall in congenital laryngeal stridor.

appearance of the slightly accentuated infantile type. A slight incurving of the epiglottis persisted; this, however, could be readily unfolded by means of a probe, and with the same instrument the aryepiglottic folds and the posterior wall could be felt lax and mobile. Beyond that no sign of malformation was present. Fig. 3 represents the aperture of the larynx during expiration, and Fig. 4 the same part during inspiration.

In two cases where the posterior wall looked slightly oedematous, and flapped with great freedom, I tried the effect of adrenalin as an astringent, applying it on a cotton-wool carrier. The resulting shrinkage led for the time to some improvement in the stridor. In the very marked cases it was necessary during recovery from the anaesthetic, in order to relieve the stridor, to place the patient on the side and hold the tongue out firmly until the child was awake. The effect of this procedure, as observed through the tube, was to give a pull on the aryepiglottic folds and prevent their too close approximation.

In all the children there was a definite history that the

Fig. 3.—Appearance of aperture of larynx during expiration.

Fig. 4.—Appearance of aperture during inspiration.

noisy breathing was worse during "colds." This was very noticeable in a boy whom I saw first of all when he was nine months old. Spells of comparative freedom alternated with severe relapses associated with wheezing in the chest. As moderate-sized adenoids were present, which seemed to keep up the catarrhal state, I removed them when the child was two years old. In three days the breathing was almost normal, and a rapid recovery took place.

In another child, the stridor became much worse after a series of fits when three months old.

The following conclusions may be drawn from these observations:

1. There is no malformation beyond an exaggeration of the natural incurving of the infantile epiglottis which can be easily unrolled by the probe.
2. There is no evidence of abnormal breathing, as suggested by Thomson and Turner. In deep anaesthesia the breathing is regular and the stridor very marked.
3. Stridor takes place at the entrance of the larynx by the vibration of the soft structures on the posterior wall. The vocal cords take no part in its production and compression of the trachea by an enlarged thymus is no essential element.

4. Variation in stridor is often due to the relative position of the tongue. It is also affected by catarrhal states of the respiratory tract, and probably by conditions of the general health.

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NOTES ON AN UNUSUAL CASE OF PAPILLOMA OF THE LARYNX IN A CHILD TREATED BY THE LOCAL APPLICATION OF FORMALIN.

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X., a boy, aged 10, was perfectly well up to Whit Sunday, 1905, when he fell asleep on the wet grass and caught a severe cold, which kept him in bed for a few days. He was very hoarse. The cold soon disappeared, but the hoarseness continued, and did not yield to ordinary local treatment. The tonsils and some adenoids were removed in August, 1905.

I first saw the boy in February, 1906. He had been hoarse for nearly a year, but during the last few weeks had been much worse, and had had several attacks of spasm of the glottis. The vocal cords were practically normal; there was a large, irregular pedunculated tumour which grew from below the anterior commissure, and occasionally protruded between the vocal cords on phonation and expiration. I removed the greater part of the growth with forceps, and the voice improved considerably for some time. The hoarseness then returned more marked than before. When I saw him again in May there were numerous small papillomata growing on the vocal cords. I removed these twice with the forceps, but they recurred. After a third operation I prescribed a formalin spray, 1 in 100. There was no recurrence of the papillomata, and in three weeks the vocal cords were, apart from a slight irregular hypertrophy, normal, and have remained so ever since. The subglottic growth had slightly increased in size, and was again partly removed by forceps. I saw the boy last in September. The larynx was practically normal, with the exception of a small growth below the anterior commissure. He is still using the formalin spray (1 in 50) a few times a week.

The case is interesting and instructive from several points of view:

1. The sudden growth of the papilloma, probably after an acute attack of laryngitis. Thrasher¹ records a case of papillomata of the larynx after inhalation of flames.
2. The initial growth was large, pedunculated, not multiple, and situated below the vocal cords, and not on the cords, as in most cases.
3. The papillomata on the cords only appeared after the use of the forceps. Was this due to traumatism and infection?
4. After the local application of formalin there was no recurrence.

Some years ago I published a case of papillomata of the larynx in an adult in which the growths recurred several times after removal by forceps, but did not recur after the use of a formalin spray. I have failed to find any record of similar cases which have been treated by formalin. We know how difficult it is to prevent recurrence of laryngeal papillomata in children, and how they seem to grow more rapidly after any operative interference by forceps, or by thyrotomy. The most successful method of treating these cases is by tracheotomy. But this is attended by many obvious disadvantages and dangers. If formalin prevents the recurrence of laryngeal papillomata after their removal by forceps, no surgical interference will ever become necessary.

REFERENCE.

¹ *Journal of Laryngology*, September, 1906.

UNDER the will of the late Mr. Harry Lewis Saltarn, of Lyndhurst, it is directed that one-fifth of the residue of his estate shall be paid to the Manchester Royal Infirmary; one-fifth to the Royal South Hants and Southampton Hospital; one-tenth to the Manchester Eye Hospital, and one-tenth to the Southampton Eye Hospital. The sum eventually to be divided would appear to be about £25,000.