follows. On those marked with an asterisk the ergotin was used in doses increasing to three and a half grains:—

March 10th	3·5 hours.	March 16th	4·5 hours.
" 11th*	3· "	" 17th	2· "
" 12th	3·5 "	" 18th	3· "
" 13th*	5· "	" 19th	3·5 "
" 14th	3·5 "	" 20th	3·5 "
" 15th*	3· "	" 21st	3· "

Total41 hours.

As regards the applications of the pressure they were divided between the morning and the afternoon, an average of 1·5 hours at a time, which was all the patient could bear, on account of pain, which was complained of after a few minutes' pressure on the side of the head corresponding to the aneurism. The skin over the artery at the place where compression was applied was at times protected with a piece of amadou, and fuller's earth was powdered on before the compression commenced. At times, in order not to chafe the skin, pressure was made a little lower down on the distal mouth of the sac. The skin at no time was abraded. On the 15th I left off the ergotin, as it gave rise to very uncomfortable symptoms—sickness, local pain, and general uneasiness. Very soon after commencing pressure, a great difference was noticeable in the character of the pulsation in the tumour; it was much reduced, and the mass was evidently solidifying. On the 19th the bruit was very slight, and on the 21st, the last day, was quite imperceptible. At this date the aneurismal sac seemed perfectly solidified, although it was evident that there was a small channel through it which let blood into the carotid beyond, since it could be felt, though with difficulty. The character of the pulsation in the sac was that of one administered by the blood-current in the innominate, and not a distending one existing in itself. Mrs. C—— now showed signs of fatigue from the pressure, and resolutely refused further treatment. I therefore constructed an apparatus consisting of a hollow air-pad, which I retained over the tubercle by means of a modified Esmarch, but I found my patient would not use it.

Another day or perhaps another two days' pressure might have cured the aneurism. As it was, Mrs. C—— after leaving town began using the arm in various violent ways, and, from what I subsequently heard, undid a good deal of what had been done for her.

The case, though incomplete, is encouraging, and it would seem, with a little more assistance on the patient's part, might have been attended with a most satisfactory result.

Wimpole-street, Cavendish-square.

NOTES ON

VACCINATION AND REVACCINATION.

BY G. E. YARROW, M.D.,

PUBLIC VACCINATOR AND MEDICAL OFFICER TO THE HOLBORN UNION.

AT a time like the present, when an epidemic of small-pox prevails, it is highly necessary that public vaccinators and others should know the full extent to which they can use the chief preventive means without being charged with over-zeal, or, still worse, cupidity. Considering the length of time the Vaccination Acts have been in operation, one is astonished at the number of contradictory statements as to the mode of working them that are continually appearing, apparently upon the best authority, and even the opposition to carrying them out by those who should evidently be among their strongest supporters. With a view to eliciting the opinion of others I should like to refer to a letter which appeared in *The Times* of Feb. 24th, from Mr. Blennerhassett, in which he calls attention to a report of the medical officer of the Lambeth Infirmary, to the effect that he is in the habit of vaccinating infants twenty-four hours old, and to a circular letter of the Local Government Board recommending that the operation be performed on infants born in the workhouses and Poor-law infirmaries within six days of birth. Mr. Blennerhassett says: "Several medical men have, I believe, protested against these arbitrary measures, as fraught with imminent risk and danger to infant life, and many persons will object to them as involving

a treatment of the children of the poor in workhouses and infirmaries entirely different from that which is enforced by law, or would be tolerated by public opinion, with respect to the vaccination of the children of the well-to-do classes."

In the first place, I am surprised to read that there exists any medical evidence of "the imminent risk and danger to life" resulting from early vaccination, as for some years I have diligently sought for such evidence, and the result has only been to confirm the experience I gained during the last small-pox epidemic, when I vaccinated between five and six hundred infants under seven days old, and I cannot call to mind one case attended by any untoward result; on the contrary, I found that the local inflammation so frequently seen in infants a few months old was rarely seen in the very young; and this I believe is accounted for by the very limited amount of movement of which the child is capable, and the low degree of sensibility of the skin at this time of life must reduce the pain of the operation and progress of the vesicle to a minimum.

Another point of great moment in reference to the vaccination of pauper children is that during residence in a workhouse they have the care of nurses and mothers which cannot be found after leaving, for even when the parent is a married woman she is usually compelled to seek her livelihood by following some employment which necessitates her absence for several hours at a time, during which the child is left to the tender mercy of a stranger or, as our great modern author puts it, "the giant child in charge of a dwarf nurse."

Many persons will join Mr. Blennerhassett in his lament that the treatment demanded of children born in workhouse infirmaries differs from that required of children of the well-to-do classes. But what alternative is there? The majority of the children are the offspring of unmarried women who leave the institution from ten to twenty days after confinement, and who cannot tell where they may next find a home, much less where the children may be found at three months old. If they are sent out unvaccinated they go forth for the most part to our densely populated localities to form possible foci of future epidemics. That evidence is not wanting to convert this possibility into a probability is demonstrated by an instance which has recently come under my notice.

A. K——, the child of an unmarried woman, born in the City-road workhouse, left at three weeks old. After having lived in several other places, the mother took apartments in one of our most densely populated thoroughfares; here the child was taken with small-pox and died last January, unvaccinated, aged eight months. An elder child belonging to the same woman is now in the small-pox hospital. Two young men residing in the house have been removed to the hospital, one of whom, aged nineteen, has since died. The child of a neighbour has also died unvaccinated (the father of this infant is a potman to a neighbouring beer-house). The child of a fourth family has been lying in a dangerous condition from the same disease (also unvaccinated). The mother of this child was in the habit of going backward and forward to the first case (A. K——) while the child was lying ill, and during this period her children were attending a board-school, from which there are now absent seven other children suffering from small-pox. Now, I think it is fair to assume that if the child A. K—— had been vaccinated three lives would have been spared, thirteen cases of small-pox prevented, and the cost of maintaining these patients at the public expense saved.

At the Holborn Union Infirmary, City-road, it is an instruction not to vaccinate until the children attain the age of six weeks. One hundred and fifty-seven children were born in this institution last year, twenty-four only of whom were operated upon before leaving, and therefore 133 infants were sent out without that protection, or the smallest guarantee of that obedience to the law which is demanded of persons in better circumstances, and which the latter in turn have a right to expect shall not be evaded by those whom they contribute to support.

In response to the circular letter of the Local Government Board, I am informed that the Guardians of the Holborn Union at their last meeting passed a resolution that all children born in the workhouse be vaccinated at fourteen days old, *subject to the consent of the mother*. The practical result of this change will be that instead of 16 per cent. of the children being vaccinated, as heretofore, there will now be none. For even if they remained long enough any one may perceive how useless it would be to waste time in arguing the point with the class of persons I have described.

On referring to the Consolidated Orders of the Poor-law

Board, under the head of "Duties of the Workhouse Medical Officer," Article 207 directs, among other things, "to vaccinate such of the children as require vaccination;" and a foot-note to this order says: "It not unfrequently arises that the parents of children in a workhouse will not allow the medical officers to vaccinate their children. In answer to an inquiry as to whether the guardians had the power to cause such children to be vaccinated without the consent of the parents in such a case, the Commissioners have stated that they are of opinion that the guardians have, without the permission of the parent, the right to vaccinate any child in their custody, during any danger of contagion from small-pox."

Again, Official Circular, vol. vii., p. 204: "The Poor Law Board have expressed an opinion, that if the guardians and the workhouse medical officer think that *any* child in the workhouse requires vaccination, the medical officer should vaccinate such child notwithstanding the objection of the parent."

My object in quoting the above is to show that the guardians have the power to cause vaccination to be performed on children in workhouses without the consent of the parents, although statements to the contrary are continually being made. That the regulations as to revaccination at the public expense are not generally understood is shown by a report in the LANCET of February 26th, which states that Dr. Barclay, in calling the attention of the Chelsea Vestry to the matter, said that the Local Government Board would not sanction the payment for revaccination of children under fifteen years of age. In your note on the subject you say: "Revaccination may be given at the public expense if the applicant has attained the age of fifteen years, or, if during any immediate danger of small-pox, the age of twelve years, and has not before been successfully vaccinated." Surely, at whatever age vaccination is performed for the first time it is primary, and payable for as such.

The Vaccination Act of 1867 (Sec. 8), after rescinding contracts providing for payment for revaccination then in operation, authorises the Privy Council to make provision for revaccination and for the amount to be paid for the same. The Act of 1871 provides (Sec. 9) that a fee of two shillings and sixpence shall be paid by anyone who does not allow the result of revaccination to be ascertained by the Public Vaccinator or his deputy, and (Sec. 13) provides for revaccination by Poor-law medical officers in houses where they are attending persons suffering from small-pox, but beyond these two references this Act makes absolutely no provision for revaccination. The form of contract does not contain a word on the subject, but a Privy Council letter, dated Feb. 18th, 1868, indicates the extent to which revaccination at the public expense may be given as follows:—"The performance of revaccination by the Public Vaccinator on persons applying to him for that purpose shall be limited in each case by the following conditions:—1. That, so far as the Public Vaccinator can ascertain, the applicant has attained the age of fifteen years, or, if during any immediate danger of small-pox, the age of twelve years, and has not before been successfully revaccinated; and (2) that, in the Public Vaccinator's judgment, the proposed revaccination is not for any sufficient medical reason undesirable; and (3) that the Public Vaccinator can afford vaccine lymph for the purpose without in any degree postponing the claims which are made on him for the performance of primary vaccination in his district."

Even the limitation prescribed in this letter is to be regretted, for the experience gained during the last epidemic, and which is being corroborated by the present outbreak, clearly proves that there are degrees of protection afforded by vaccination, but one mark, unless it be very large, is not as good as five or six, and the admissions of vaccinated persons into our small-pox hospitals are in an inverse ratio to the number of vaccination marks which they possess.

Old-street, E.C.

BRISTOL INFIRMARY.—The report of the committee of this institution, read at the annual meeting on the 23rd ult., was, from a financial point of view, of a decidedly gloomy character. Whilst the expenditure during 1880 was £13,116, the income stood at £11,198, showing a deficiency of £1918, while there was a balance due to the treasurer of £8816. The remark of the president, that it would be a lasting shame to the great and wealthy city of Bristol if the committee had to close any of the wards of the charity, must, we think, be endorsed by his fellow-citizens.

THE PATHOGENY AND TREATMENT OF BRONCHOCELE OR GOITRE.

BY EDWARD WOAKES, M.D. LOND.

(Concluded from page 498.)

CASE 9.—A. S.—, a female, aged eighteen, in service at Stratford. The tumour had existed two years. On Dec. 11th, 1877, presented simple goitre; girth $13\frac{1}{2}$ in. At first patient was treated with bromides, iodides, and iron for three months; under this treatment goitre enlarged to $13\frac{3}{4}$ in. On March 22nd, 1878, she was given fifteen minims of dilute fluoric acid. This in April was increased to thirty minims; swelling disappearing. On June 21st scarcely a trace of enlargement. Time of taking acid three months.

CASE 10.—S. H.—, aged twenty-six years, a laundress, living at Islington, had noticed the enlargement four years ago. In September, 1877, patient presented a firm tumour the size of a tennis ball, occupying the isthmus, and a portion of the right lobe of thyroid body. There was deep-seated fluctuation, but from the thickness of the cyst-walls and extreme tenseness of the swelling this was somewhat obscure. It was diagnosed as a fibro-cystic goitre; girth of neck $15\frac{1}{2}$ in. Wishing to test the acid in this phase of the disease, the patient was given fifteen minims in water three times daily, on Sept. 4th. On Sept. 18th the girth was 15 in. On Sept. 25th she was seen by an assistant, who injected the tumour with twenty minims of tincture of iodine. After this a thin clear fluid continued to ooze through the puncture made by the needle during two hours. On Oct. 2nd the girth was reduced to $13\frac{1}{2}$ in., owing to the escape of fluid, and the contracted cyst-wall, about the size of a walnut, was distinctly to be made out. On Nov. 20th scarcely a trace of this remained, and the patient was discharged cured. Time of treatment three months.

Remarks.—The above case has been already alluded to in the opening paragraph of this paper. It is unique in its way, for, though the original design of the treatment was frustrated by the inadvertent tapping as detailed, it afforded the unexpected result of a fibro-cystic goitre of considerable size and long duration recovering in three months with no other treatment than that recorded. The puncture and injection were made on the assumption that a fibrous goitre was being dealt with. The iodine could scarcely have affected the result, as, being diffused through the contained fluid of the cyst, it must have escaped immediately with it. It is opposed to general experience for a cyst so tapped not to refill. To the absorptive influence of the acid on the solid portion of the tumour, indicated by its diminution during the three weeks it was taken preceding the tapping, may with fairness be accorded the change in its character, which averted the secretion of fresh fluid, and ended in the rapid disappearance of the disease.

CASE 11.—H. R.—, female, married, residing at Chelsea, presented a mixed goitre of one year's duration, Sept. 7th, 1877. Blistering fluid was applied to the swelling, and she was given ten minims of dilute fluoric acid three times a day. On Oct. 5th she was so much better that she did not attend subsequently. This case was of a mild type, and illustrates the advantage of a combination of local treatment with the fluoric acid internally.

CASE 12.—C. K.—, a female, aged twenty-eight, married, living at Old Ford, presented on March 12th, 1878, a goitre of five years' duration. The right lobe was of the firm, fibrous, and the left the soft or simple variety. On both sides the enlargement rose to the level of the hyoid bone. Girth $14\frac{3}{4}$ in. At the above date she was given fifteen minims of dilute fluoric acid twice a day. On March 22nd it was increased to twenty minims. On April 9th the girth was 14 in. On April 30th the dose was increased to thirty minims, and on May 21st to forty minims. The girth was now $13\frac{1}{2}$ in. On May 28th the entire tumour had subsided to the normal dimensions of the gland. Time, three months.

CASE 13.—E. B.—, female, aged seventeen, on October 23rd, 1877, presented a small recurrent fibrous enlargement of the isthmus. She took fifteen minims of fluoric acid twice a day for three weeks, at the end of which time only a trace of the enlargement remained.

CASE 14.—L. R.—, a female, aged twenty-nine, married, living in the Waterloo-road. She had been the subject of