rubin, and afterwards urobilin, and the greater part of the rest of the corpuscles to form urea.

Since delivering this lecture to my class at the College of Medicine, I have read, with very great interest and profit, the paper on urea by Dr. Noel Paton, which appeared in this JOURNAL during February. The clinical investigations, which I have made so fully, confirm the results arrived at by that gentleman, who, by experiments carried out in the larger and well equipped laboratories of the University of Edinburgh, has proved the close relationship which exists between urea and the secretion of bile.

Dr. Paton is, I believe, about to show experimentally how the blood-corpuscles and urea stand related to each other. It is in support of the same view, arrived at by clinical observation, that I have forwarded this paper to the BRITISH MEDICAL JOURNAL.

ONE HUNDRED AND THIRTY-NINE CONSECUTIVE OVARIOTOMIES PERFORMED BETWEEN JANUARY 1ST, 1884, AND DECEMBER 31ST, 1885, WITHOUT A DEATH.

Read before the Birmingham and Midland Counties Branch.

By LAWSON TAIT, F.R.C.S.,
President of the British Gynecological Society.

FROM our recent experience in ovariectomy, it would almost appear as if the time had arrived when we had the last word to say about it, and had now merely to refer to it occasionally in valedictory or inaugural addresses as one of the marvels of the nineteenth century. Certainly nothing more astonishing can be indicated than the advance during the last eight years, at the beginning of which period Sir Spencer Wells left ovariectomy with a mortality of 25 per cent., and the position it has now reached, having a mere fractional mortality, due to influences of a purely accidental kind. By accidental, I mean such influences as are not inherent to the operation itself, influences which may be avoidable, it is true, and ought to be avoided, but which may fairly be classed as outside risk. I do not see, for instance, how tetanus can be avoided; and, therefore, its occasional fatal influence in ovariectomy is sure to be felt. So also death, either directly or indirectly from the effects of the anæsthetic, will surely come occasionally forward as an unavoidable result. But all the truly intrinsic causes of death have been banished, and I wonder very much if this is true of any other grave operation in surgery.

We speak of the mortality of certain operations, but I doubt very much if we have arrived at any notion of what the mortality of any other operation really is; that is, the mortality due to the operation pure and simple, not to causes which are avoidable, as unsanitary surroundings, or bad surgery; not the mortality of this or that hospital, this or the other operator, but the lowest mortality which can be, and, therefore, that which ought to be, achieved.

This success in abdominal surgery has been the basis of a large number of lessons applicable within its own range, and not without benefit to other fields. It has, for instance, absolutely destroyed our fear of the peritoneum, and has justified our opening that sacred sac very much as we open our pockets. It has revolutionised our notions of pathology in some directions, and has confirmed them in others; and it, above all things, overwhelmed with confusion the utterances of therapeutic dogmatists. Baker Brown, after a series of disasters, uttered the truism, "It's the peritonitis that beats us." Now, we beat the peritonitis. On the slightest indication of peritonitis after an ovariectomy, we give a rapidly acting purgative, it matters not what; the patient's bowels are moved, and the peritonitis disappears. This practice I introduced in 1875, and it is now almost uniformly adopted. How different from the views we had drilled into us years ago, that opium was the sheet-anchor of the practitioner in all abdominal troubles, when I say now that all opiates are forbidden in my practice, unless they be required to ease a dying patient out of the world.

Peritonitis was formerly regarded as a bar to any abdominal operation, but, thanks to the courage of Keith and Wiltshire, it is now the most trenchant argument for immediately opening the abdomen. Let me briefly recite the subsequent history of one of the cases on that list (101), a young girl, only 14, from whom I removed a large cystoma of the left ovary on July 18th, 1884.

On March 4th of this year, I received a letter from Dr. Pearson, of Kingswinford, who placed her under my care, to say that he feared something had gone wrong with the other ovary. I telegraphed to him to bring her over at once, and, when I admitted her to my private hospital, there was abundant evidence to prove that Dr. Pearson was right. The pelvis was occupied by a firm doughy swelling pushing the uterus forward and upwards, and this mass could be felt above the pelvis. To the right side, another similar mass could be felt running up and over the right kidney. It was not clear whether these masses were or were not connected, and they both felt to me like soft cancer, an idea justified by the patient's age. What history could be obtained from the friends was not clear, and, therefore, I recommended that the abdomen should be at once reopened. After some demur, this was agreed to by the parents, and it is fortunate for the child that they gave their consent. I operated on March 5th, and found two large encysted peritoneal abscesses, containing about three pints of the most stinking pus I ever encountered. Neither of the cavities communicated, so far as I could discover, with the general sac of the peritoneum, nor did they communicate with one another, and I could detect no other fluid or mass in the abdomen. But, in a few days, it became evident that I had encountered and had overcome only half the difficulty. Whether from the lower cavities the rest of the peritoneum became infected, or whether the suppuration of the whole of the sac was the original scheme, I cannot tell, but the whole of the rest of the sac did suppurate, and I drained out of it about seven pints (eleven pints in all) of horrible stuff; and the child is now practically well.

The conclusion is now completely established in my own mind, and receives confirmation every month: "When in doubt, open the abdomen;" the doubt being one that my patient will not recover if left alone. In the case I have just narrated—and it might be supplemented by many other cases just as striking and quite as successful—I might have concluded that the second growth was a mass of soft cancer, and have sent the poor child home to die from my mistake. If it had proved to be cancer on exploration, the chances are infinitely small that I should have done any harm; and now, as the matter stands, I have achieved a brilliant success.

This is the doctrine which I want to preach, for the support of which I have recently had the powerful aid of Dr. Wade; and not all the foolish outcries about the laparotomy epidemic, raised either at Liverpool or elsewhere, or any other kind of opposition, is in the least likely to hinder its propagation. I have not spoken to Dr. Wade precisely on the subject, but I strongly suspect that a powerful and moving influence in his mind, towards the adoption of this view, is a case which was, to me, a revelation and a lesson of the most terrible kind. It was, I think I may say, the initiation of this new course of practice; for I have never since allowed a case of peritonitis to die without at least proposing abdominal section as the proper course.

Many years ago, a lady of high social rank, who honoured me by her friendship, and to whom I was deeply attached, had performed on her by me a trifling uterine operation, which had been done without ill effect many times before. It was the insertion of a sulphate of zinc pellet into the uterus, for the arrest of extreme menorrhagia due to a myoma. She died about fourteen days after, suffering from many symptoms which suggested peritonitis, save that her pulse and temperature always contraindicated this conclusion. Dr. Wade saw her just before the end of her illness. At the *post mortem* examination, we found a large quantity of pus, all of which could have been cleared out by an abdominal section and drainage.

Three great lessons were taught me by this case: first, that tinkering with the inside of a uterus occupied by a myoma is not satisfactory, and more dangerous than removing the appendages; second, that fatal peritonitis may occur with a low pulse and a low temperature—a fact I did not know before that; third, that suppurative peritonitis might be treated like any other abscess. And from all these lessons I have most abundantly profited.

The absolute want of fear of the peritoneum, which has grown out of our success as a matter of necessity, has brought about many other startling changes. We are now dignified by the name of the "Birmingham School of Gynecology," and our views are treated with respect; but it is not many years since language of a totally different kind was levelled against my colleague, Dr. Savage, and myself, and many blows had to be received, and not a few were given back. But the incredulity which was so freely expressed in this country by people who would not come to see for themselves, was speedily overcome by the evidence of those who came in large numbers from America, and finally by a missionary tour which I undertook in the States, demonstrating on material freely supplied to me there, and to audiences neither stupid nor prejudiced, many of the most important facts

Table of 130 cases of Ovariectomy performed between January 1st, 1884, and December 31st, 1885, without a death.

No.	Residence.	Medical Attendant.	Age.	Married or Single.	Disease.	Operation.	Date.
							1884.
1	Tanworth	Dr. Fausset	26	Married	Cystoma	left ovary	January 3rd.
2	Newport, (Monmouth)	Dr. James	56		Cystoma	right ovary	3th.
3	Birmingham	Dr. Smith	37		Parovarian cyst	removed	7th.
4	Birmingham	L. T.	68		Cystoma	right ovary	10th.
5	Smethwick	Dr. Annie Clark	32		Cystoma	right ovary	12th.
6	Birmingham	L. T.	55		Cystoma	right ovary	15th.
7	Stafford	Mr. Weston	31	Single	Dermoid cyst	right ovary	15th.
8	Hexham	Dr. Farmer	30	Married	Abscess of ovary	right ovary	18th.
9	Qswestry	Dr. Beresford	54		Parovarian cyst	removed	19th.
10	Birmingham	L. T.	40		Cystoma	right ovary	February 2nd.
11	Birmingham	Sir James Sawyer	59		Cystoma	right ovary	14th.
12	Bliston	Dr. Larkin	35		Cystoma	left ovary	14th.
13	Rugby	Dr. T. Duke	33	Single	Cystoma	both ovaries	23th.
14	Birmingham	Dr. Simon	30	Married	Cystoma	left ovary	March 10th.
15	Birmingham	Dr. Craig	37		Parovarian cyst	removed	12th.
16	Birmingham	L. T.	32	Single	Parovarian cyst	removed	13th.
17	Birmingham	Mr. Newton	34	Married	Cystoma	right ovary	13th.
18	Aston	Mr. Hopkins	38		Cystoma	both ovaries	20th.
19	Luton	Dr. Evans	18	Single	Parovarian cyst	removed	21st.
20	Birmingham	Mr. Pugh	27		Cystoma	left ovary	26th.
21	Birmingham	Dr. Ward	29	Married	Cystoma	both ovaries	27th.
22	Birmingham	Dr. Hugh Thomas	45		Cystoma	right ovary	April 3rd.
23	Wolverhampton	L. T.	68		Cystoma	left ovary	10th.
24	Birmingham	Mr. Briggs	22		Cystoma	right ovary	26th (See note next page)
25	Birmingham	Mr. Euan Smith	35		Parovarian cyst	removed	May 3rd.
26	Birmingham	Mr. Harmar	22	Single	Cystoma	both ovaries	3rd.
27	Birmingham	Mr. Palmer	42	Married	Cystoma	right ovary	6th.
28	Derby	Dr. Bedford	57		Cystoma	left ovary	8th.
29	Kidderminster	Dr. Coulbourn	27	Single	Cystoma	left ovary	9th.
30	Manchester	Dr. Handford	23		Cystoma	left ovary	12th.
31	Birmingham	Mr. F. Hopkins	40	Married	Cystoma	right ovary	13th.
32	West Bromwich	L. T.	51		Cystoma	right ovary	13th.
33	Birmingham	L. T.	43		Cystoma	left ovary	16th.
34	Leamington	Dr. Wyer	29	Single	Cystoma	both ovaries	24th.
35	Blanchard	Dr. Davies	48	Married	Parovarian cyst	removed right side	26th.
36	Bidgborough	Dr. Thursfield	46		Cystoma	both ovaries	26th.
37	Aston	Mr. Whitcombe	34	Single	Parovarian cyst	removed right side	27th.
38	Ross	Mr. Norman	44	Married	Cystoma	both ovaries	June 3rd.
39	Walsall	Dr. Sharp	42		Cystoma	both ovaries	12th.
40	Birmingham	L. T.	36		Cystoma	both ovaries	16th.
41	Leamington	Dr. Smith	64		Cystoma	both ovaries	30th.
42	Pershore	L. T.	28	Single	Cystoma	left ovary	21st.
43	Birmingham	L. T.	22		Cystoma	both ovaries	27th.
44	Qswestry	Dr. Aylmer Lewis	38	Married	Cystoma	both ovaries	29th.
45	Birmingham	L. T.	42		Cystoma	both ovaries	July 2nd.
46	Coventry	Dr. Fenton	29	Single	Parovarian cyst	removed	3rd.
47	Leamington	Mr. Morris	27	Married	Cystoma	right ovary	4th.
48	Birmingham	Mr. Gilbert Smith	43		Cystoma	both ovaries	7th.
49	Wrexham	Dr. Davies	20	Single	Cystoma	right ovary	21st.
50	Stonehouse	Dr. Walters	51	Married	Cystoma	left ovary	22nd.
51	Wolverhampton	Dr. Lycett	45		Cystoma	both ovaries	22nd.
52	Kidderminster	Dr. Waddell	43		Cystoma	both ovaries	26th.
53	Birmingham	Dr. Haynes	26		Cystoma	both ovaries	28th.
54	Birmingham	Mr. Lawrence	22	Single	Cystoma	left ovary	29th.
55	Oldham	Dr. Stanfield	38	Married	Cystoma	both ovaries	August 10th.
56	Coventry	Dr. Handford	37	Single	Cystoma	left ovary	October 10th.
57	Stonbridge	L. T.	35		Cystoma	right ovary	18th.
58	Birmingham	Dr. Hoare	27	Married	Cystoma	both ovaries	17th.
59	Birmingham	Mr. Harmar	29		Parovarian cyst	removed	20th.
60	Birmingham	Dr. Kenny	28		Cystoma	both ovaries	23rd.
61	Birmingham	Dr. Hadley	41		Cystoma	both ovaries	23rd.
62	Birmingham	L. T.	24	Single	Parovarian cyst	removed	31st.
63	Birmingham	Dr. Thomas	23	Married	Parovarian cyst	removed	31st.
64	Birmingham	Mr. Green	50		Cystoma	left ovary	November 10th.
65	Kidderminster	Dr. Langford	63		Cystoma	right ovary	20th.
66	Tipton	Dr. Price	32	Single	Cystoma	both ovaries	23rd.
67	Southport	Dr. Craven	26		Cystoma	both ovaries	29th.
68	Birmingham	L. T.	27	Married	Cystoma	both ovaries	December 20th.
69	Birmingham	L. T.	28	Single	Cystoma	both ovaries	23rd.
							1885.
70	Birmingham	Mr. Lloyd	32	Married	Cystoma	left ovary	January 6th.
71	Nottingham	Dr. Elder	59		Cystoma	left ovary	3th.
72	Birmingham	Mr. Harmar	30	Single	Cystoma	left ovary	17th.
73	Derby	Mr. Taylor	40	Married	Parovarian cyst	removed	23rd.
74	Wellington	Dr. Glissan	29	Single	Cystoma	both ovaries	February 3rd.
75	Melbourne	Dr. Elder	34		Cystoma	left ovary	7th.
76	Leamington	Dr. Tomkins	70		Cystoma	both ovaries	11th.
77	Harrogate	Mr. Myrtle	25		Parovarian cyst	removed	16th.
78	Birmingham	L. T.	32		Cystoma	both ovaries	19th.
79	Monmouth	Dr. Woollett	16		Parovarian cyst	removed	March 2nd.
80	Wolstanton	Dr. Massingham	60	Married	Cystoma	right ovary	27th.
81	Bresham	Dr. Blake	34	Single	Cystoma	both ovaries	April 14th.
82	Leamington	Dr. Jay	30		Cystoma	right ovary	17th.
83	Birmingham	Dr. Hoffman	30	Married	Cystoma	both ovaries	18th.
84	Buxton-on-Trent	Dr. Clements	23	Single	Cystoma	right ovary	18th.
85	Ashby-de-la-Zouch	Dr. Williams	23	Married	Abscess of ovary	right ovary	24th.
86	Birmingham	Mr. Leech	40		Cystoma	both ovaries	28th.
87	Leamington	Dr. Whitby	43	Single	Cystoma	right ovary	May 2nd.
88	Ashby-de-la-Zouch	Dr. Betts	33	Married	Cystoma	both ovaries	14th.
89	Birmingham	L. T.	35		Cystoma	both ovaries	15th.
90	Birmingham	Dr. Malins	45		Parovarian cyst	removed	15th.
91	Ludlow	Mr. Brooks	44		Cystoma	right ovary	26th.
92	Willehall	Mr. Hartill	26	Single	Cystoma	right ovary	26th.
93	Bridgeforth	Mr. Rhodes	43	Married	Cystoma	both ovaries	June 5th.

No.	Residence.	Medical Attendant.	Age.	Married or Single.	Disease.	Operation.	Date.
94	Birmingham	Dr. Parkes	25	Married	Cystoma	right ovary	June 9th.* 1885.
95	Birmingham	L. T.	27	"	Cystoma	both ovaries	" 16th.
96	Birmingham	Mr. Nicholls	24	"	Cystoma	both ovaries	" 20th.
97	Burton-on-Trent	Dr. Hooper	25	"	Cystoma	both ovaries	" 21st.
98	Birmingham	Mr. Hallwright	34	"	Cystoma	right ovary	" 22nd.*
99	Birmingham	Dr. Parkes	23	Single	Cystoma	both ovaries	July 3rd
100	Thirsk	Dr. Hartley	53	Married	Parovarian cyst	enucleated	" 14th.
101	Stourbridge	Dr. Pearson	14	Single	Cystoma	left ovary	" 18th.
102	Birmingham	Dr. Phillips	34	Married	Abscess of ovary	right removed	" 20th.
103	Birmingham	Dr. Shillito	40	"	Parovarian cyst	removed	" 20th.*
104	Rugeley	Mr. Freer	50	Single	Cystic sarcoma	right ovary	" 21st.
105	Birmingham	Mr. Marriott	36	Married	Parovarian cyst	removed	" 23rd.]
106	Shrewsbury	Dr. Rigby	36	"	Cystoma	left ovary	" 25th.
107	Cheltenham	Mr. Cocks Johnson	25	Single	Cystoma	both ovaries	" 25th.
108	Birmingham	L. T.	31	Married	Parovarian cyst	enucleated	" 26th.
109	Birmingham	Dr. Fitch	19	Single	Cystoma	right ovary	" 28th.
110	Birmingham	Mr. Hollinshead	46	Married	Cystoma	right ovary	August 4th.
111	Hereford	Mr. Turner	31	Single	Cystoma	right ovary	" 4th.
112	Birmingham	Dr. Nodley	47	"	Parovarian cyst	enucleated	" 7th.
113	Shifnal	Mr. Stubbs	46	Married	Cystoma	left ovary	" 19th.
114	Birmingham	Mr. Hallwright	29	"	Parovarian cyst	removed	" 25th.
115	Oldham	Dr. Campbell	35	"	Cystoma	both ovaries	" 26th.
116	Birmingham	L. T.	25	Single	Cystoma	both ovaries	September 2nd.
117	Birmingham	Dr. Wilkes	26	"	Cystoma	left ovary	" 14th.
118	Leicester	Dr. Clifton	31	Married	Parovarian cyst	enucleated	" 18th.
119	Nottingham	Dr. Elder	56	"	Cystoma	right ovary	" 21st.
120	Birmingham	Dr. Williamson	38	"	Cystoma	left ovary	" 25th.
121	Kidderminster	Dr. Addenbrooke	34	"	Parovarian cyst	enucleated	" 26th.
122	Birmingham	Mr. Hartley	35	"	Cystoma	both ovaries	" 28th.
123	York	Mr. Shann	31	"	Cystoma	left ovary	October 3rd.
124	West Bromwich	Dr. Pitt	53	"	Cystoma	left ovary	" 12th.
125	Melbourne	Dr. Shady	58	"	Cystoma	left ovary	" 13th.
126	Nottingham	Dr. Elder	30	"	Cystoma	both ovaries	" 17th.
127	Ireland	Dr. Evans	18	Single	Cystoma	both ovaries	" 19th.
128	Birmingham	L. T.	44	Married	Cystoma	both ovaries	" 20th.
129	Birmingham	L. T.	37	Single	Cystoma	right ovary	" 23rd.
130	Denbigh	Dr. Prichard	23	"	Cystoma	right ovary	" 26th.
131	Coventry	D. Fenton	27	Married	Parovarian cyst	removed	" 29th.
132	Birmingham	L. T.	33	"	Cystoma	both ovaries	" 30th.
133	London	Dr. Orwin	49	"	Cystoma	left ovary	November 12th.
134	Redditch	Dr. Page	29	Single	Cystoma	left ovary	" 14th.
135	Derby	Dr. Feulds	47	Married	Cystoma	both ovaries	" 20th.
136	Nottingham	Dr. Bland	33	"	Cystoma	right ovary	" 24th.
137	Birmingham	Mr. Bull	29	Single	Abscess of ovary	right ovary	December 4th.
138	Birmingham	Mr. North	29	"	Cystoma	both ovaries	" 5th.
139	Presteigne	Dr. Debenham	52	Married	Ruptured cystoma	left ovary	" 7th.

* In all these cases (ten in number) the tumours had undergone axial rotation, and were gangrenous.

which were capable of demonstration, according to Sir Spencer Wells, only in Birmingham, and were non-existent in London or elsewhere in Europe. This attitude of Sir Spencer Wells is apparently still maintained by him; for, in a recent address delivered here, he passed by all these facts without allusion to them, "deaf as the adder which closteth her ear."

Sir Spencer seems puzzled at the change which these few short years has brought about; still more puzzled that the change should have been effected, not only without his aid, but in spite of his most strenuous opposition. He laid down the law that an ovarian tumour should not be meddled with so long as the patient was able to get about, and he encouraged and practised tapping to obviate the major operation as long as possible. How mistaken this policy was, is shown by two facts. Not one of these 139 cases had been tapped; and for many years past, I have not had a fatal case that had not been tapped. In Stillings' strong words, we conclude now that tapping an ovarian tumour is a surgical crime, and it has accordingly been banished from practice, and ovarian tumours are removed as soon as they are recognised.

Another change effected within the last eight years, and wholly as the result of work done here, a change which has most certainly had considerable effect in reducing our mortality, is the shortening of our incisions. Sir Spencer Wells talks of incisions over five inches as being "long incisions," whereas I regard anything over three inches as excessive, and my average incision is not more than two. To this it has been objected, that it increases the difficulty of the operation; but I answer that it is only so in the hands of a bungling operator. Nothing save irreducible solidity can justify a five-inch incision. The chief argument in favour of keeping the incisions within the shortest limits is the diminution of risk of subsequent enterocoele.

This sequel of abdominal section happens in the practice of every one, no matter how the wound be stitched; and any operator who says it never happens in his particular practice, is merely one who speaks rashly, and does not keep his eye on his cases long enough.

The method of stitching the wound together is of sufficient import-

ance to demand a word, if only to condemn the practice, recommended by Sir Spencer Wells, of including only the peritoneum and skin. If you divide skin, fascia, muscle, and peritoneum, you must include all four tissues in your stitches, keeping the corresponding tissues on each side as correctly in relation to each other as possible; if you mean the abdominal wall to have as much strength as it had before you cut it. If you exclude tendon and muscle, you exclude the chief elements of strength in the union. On this important matter, Sir Spencer Wells was led away by the experiments he made by vivisectioning rabbits.

As to the dressing of the wound, I still adhere to the dry absorbent cotton-wool, quite free from any kind of germicide. My fear of germs has steadily diminished; so that, if I could get them in sufficiently large quantities, and found them dry, elastic, and absorbent, I would willingly stuff my pads with them instead of wool.

The main feature of change accomplished within the last eight years in ovariectomy is the treatment of the pedicle. The clamp has been wholly deserted, and the intraperitoneal method adopted. The varieties of this method are practically only two, the silk ligature and the cautery. I adhere uniformly to the silk ligature used in the method known as the Staffordshire knot, and it has never failed me. Dr. Keith and I have a friendly rivalry in our respective advocacy of the cautery and the knot, but I prefer the knot because it is universally applicable; whereas the cautery cannot be employed for intrapelvic work.

The method of cleansing the peritoneum has also undergone a considerable change, and the elaborate system of sponging which I used to practise, as directed by Sir Spencer Wells, has gradually given way to a system of washing which is much better. I fill the abdomen with blood-warm water, and wash all the organs, and I repeat this till the water comes off clear; and I wish to say that the water used has not been boiled, and contains no drug or chemical substance beyond what is stated in the report of the Medical Officer of Health for the Borough. The water is plain unfiltered tap-water, warmed by the addition of enough from the boiler. It is full of germs, and sparks

and small beasts of thirty-four different varieties, according to a careful report of Dr. Alfred Hill, published some few years ago.

The only point remaining, and worthy of further allusion, is that all the conclusions formulated by Sir Spencer Wells in 1878, based on his own experience, have, without exception, been reversed by the statistics freed from his heavy mortality. One of his conclusions was a very serious one, for it hampered progress very much, especially in operations for removal of the uterine appendages. It was to the effect that removal of two ovaries was a far more fatal operation than removal of one.

This conclusion ought to have been, that two pedicles in a clamp were far more risky than one; now it is evident that it is in no way more risky to remove two ovaries for cystoma, or anything else, than to remove one. In connection with this point, it may be as well to say that, in the period embracing this series of 139 successful cases, there has not been in my practice a single incomplete operation.

Now that we have cleared away all our superstitions, and view the facts in a more reasonable light, we see this operation of ovariectomy not only the most successful achievement in surgery, but we have to regard it as a portal, which, opened within the last eight years, has led to innumerable other blessings to suffering humanity.

CONTAGIOUS PNEUMONIA.

By WILLIAM BRUCE, M.A., M.D., Dingwall.

THE following paper was read at a meeting of the Inverness and Ross Sub-branch of the Northern Counties Branch of the British Medical Association, and is now published as a continuation of a former contribution, on Contagious Pneumonia, which appeared in the JOURNAL on August 11th, 1883.

It may be taken as quite settled that epidemics of pneumonia, of an infective character, do occur at rare intervals; the evidence being complete, not only on the side of the patients' histories occurring in groups, with definite connections locally, but also from the proof of active organisms, with well defined characters, having been found, when properly searched for and examined. I am sorry I did not possess the necessary knowledge, or physical means, of drawing and describing those organisms in the set of cases I have seen; but the fact will be noted that organisms were seen, at one stage numerous and active, and at a later stage either inactive, or not to be found at all.

There have been occasional cases of pneumonia observed since, in this district; but they have been very few (fifteen in 1884) in my practice, and do not exceed the usual number in similar localities. With regard to the natural history of contagious pneumonia, I would draw attention to the almost constant presence of pleurisy as a concomitant of pneumonia; indeed, it was often the first and most striking symptom. I think I have seen a run of pleurisy cases before, and may have missed the pneumonia. The interesting point is that, in cattle, a similar disease is called pleuro-pneumonia.

As to treatment, it will be noticed that one case was bled from the arm. This I have often previously done in pneumonia, and, twenty-five years ago, it was my common practice. My friend, Professor Dyce Davidson, of the University of Aberdeen, saw the case referred to, and urged me to bleed. He and others considered that the bleeding saved the patient's life. Certainly the girl was, that day, in the gravest danger, with respirations over 80 per minute and a running pulse. But I think the tide was turned before she was bled. Certainly the bleeding did no harm, and gave relief, as it usually does. On the whole, my experience is that venesection has no real influence on pneumonia—nor, let me add, on one or two other diseases in which, I may say, I have invariably bled patients freely from the arm, namely, puerperal and albuminuric convulsions. I am not, however, disposed to abandon the lancet, any more than many other doubtful remedies of the *Pharmacopœia*. I would draw the line, however, at the hither side of calomel and large doses of antimony, as I equally disapprove of brandy and beef-tea, given as a matter of routine. Poulitices, continued for a reasonable time, say, two or three days, followed by firm strapping, mild expectorants, regulated nourishment, and good nursing, with plenty of fresh warm but not hot air, are, to my mind, the essentials of treatment in contagious pneumonia. The healthy and strong recover; the very old, and especially the dissipated, die off quickly. And this will continue to be the result in such patients, in spite of all treatment. I hope my neighbour, Dr. Adam, will contribute his cases and experience; and then, with Dr. Sutherland's (see JOURNAL, August 11th, 1883, and *Collective Investigation Record*, vol. ii), we shall have a pretty complete picture of the disease I have

endeavoured to describe, as witnessed in Wester Ross in 1882-83. I should like to know if any of our members have any reason to believe in the occasional epidemic character of acute rheumatism. I think I could bring forward a series of cases, tending to show that acute rheumatism does, now and again, become epidemic.

GROUP V. CASE XVII.—Mrs. R. was first seen on August 26th, 1883. The day before she had felt chilly, and, in the evening had a rigor; pulse 102, temperature 101°. August 27th. Pulse 102, temperature 101.5°. She had a flushed face, pain in the right side, and cough. August 28th. She had pain in the side and cough, with rusty sputum; pulse 112, temperature 102.4°, respirations 40. August 30th. She had a troublesome cough, with tenacious rusty sputum, great thirst, and foul tongue; pulse 112, temperature 102.5°, respirations 39. August 31st. There were dulness at both bases, bronchial breathing, and rusty sputum; pulse 128, temperature 101°, respirations 40. September 1st. Pulse 92, temperature 101.6°, respirations 52. The other symptoms continued. The sputum was examined microscopically, and found to contain numerous micro-organisms, 1-10,000th to 1-14,000th part of an inch in diameter, some round, some dumb-bell-shaped. September 3rd. Her condition was little altered. September 4th. Pulse 88, temperature 101.6°, respirations 60. There were dulness and bronchial breathing, with sonorous rales, all over the left and upper lobe of the right lung. Air was entering the lower lobe of the right lung fairly well. September 5th. Pulse 100, respirations 52. Both sides behind were full of moist rales. The sputum was tenacious, but not bloody. September 7th. Pulse 100 (emptying), respirations 52. The right lung was pretty clear. September 10th. Pulse 94, temperature 101, respirations 57 to 60. There was cough. The pulse was fairly strong, and had not the suddenly emptying character of the few former visits. The patient could lie down in bed on the left side with comparative comfort. The sputum was muco-purulent, tenacious, and in great quantity. The right lung was clearing up well; the breath-sounds were rough; there were no adventitious sounds. In the left lung were rales and bronchial breathing. September 13th. She was a good deal improved; pulse 90, respirations 30. The cough was much less troublesome, and the lungs were clearing up well. This case progressed favourably, and the patient is now quite well.

CASE XVIII.—Mary H., aged 16, residing at Novar, Ross-shire, was admitted to the Ross Memorial Hospital, Dingwall, on September 1st, 1883, suffering from acute pneumonia. Two years ago, the patient had typhoid fever, and was then treated in this hospital for three weeks, at the end of which time she was discharged convalescent. Since that time, her health had continued good until two days before admission, when the patient was seized with her present illness. The patient had acted in the capacity of domestic servant to Case XVII, who, on August 25th, was laid up by a very sharp attack of pneumonia. The patient continued to attend to her mistress until August 29th, when she herself became the subject of the same disease. On that day (29th), the patient had a rigor, and severe pain in the left side. She became very feverish and weak, and took to her bed. On the 30th, she was visited, when the following state of matters was found. She had pain in the left side. There was dulness up to within one inch of the inferior angle of the scapula behind, and to within one inch of the nipple in front. There were fine crepitation, cough, and rusty sputum. On August 31st, a small quantity of sputum, which had been collected in a stoppered bottle which had previously been thoroughly cleaned, was examined under the microscope. Great numbers of minute organisms were discovered, moving about in the most lively fashion. September 1st. The patient was removed to hospital. The temperature stood at 101°, pulse 105, respirations 42. She had flushed face and pain in the side. Dulness of the left side was well marked up to the angle of the scapula, two inches below which fine crepitation could be heard; and, in the axillary line, a distinct pleuritic friction-sound. On the morning of September 2nd, temperature 102.8°, pulse 125, respirations 46. She was flushed, had pain in the side, friction-sound, crepitation, and dulness; and, on the whole, there was little change from the previous day. The evening temperature was 108°, pulse 130, respirations 50. To-day, the patient was made to expectorate upon a slide, which was immediately placed under the microscope, when numerous micro-organisms were found to be present in the sputum. It may be mentioned that, after this date, though the organisms were still present, they were never found to move about as they did in the earlier stages of the attack. September 3rd. The nurse reported that the patient had had a very restless night. On examination of the chest, it was found that the left lung presented no change from the records of the previous day, but that the right lung had also become affected, being

¹ The groups and cases are numbered in continuation of those in the former paper.