unless the stricture is attended to, a permanent urethral fistula remains; usually the stricture is leisurely attended to by dilatation, and even then the fistula is often obstinate, and a source of annoyance to the patient perhaps for years. Some surgeons are more heroic (for example, the late Dr. Van Buren, of New York); they open the abscess, and then divide the stricture from the outside upon a grooved staff, thus performing a Syme's operation, and remedying the abscess and the stricture at the same time. The result is generally satisfactory, but all will allow that such an operation is a very serious tax upon a patient's powers, and that he must remain a patient, and far from comfortable, for some four, five, or six weeks. Such an abscess as just described is not an extravasation abscess; at first it does not communicate with the urethra, although it does so in a few days; it forms in the perineum outside the urethra, as Sir Henry Thompson has pointed out, just as an abscess may form by the side of the rectum without opening into it. A real extravasation abscess is not so very common; it begins by minute extravasation behind the stricture, but the formation is tedious, and is preceded by a slow-growing cord-like process, which is unmistakable to the touch of the practical surgeon. Now my point is this—and I have lately verified it in three cases—if the surgeon is prompt in dividing the urethral stricture, a true perineal abscess never will communicate with the urethra, and the patient will be saved all the trouble of a urinary fistula. I freely divide the stricture from inside the urethra, pass a 15 or 16 (Eng.) steel sound, and tie into the bladder a No. 12 gum catheter *per penem*. I then put the patient into the lateral lithotomy position, and, with my left forefinger in the bowel, I introduce a sharp narrow knife into the perineum, half an inch above the anus. I go straight in until pus issues, and then withdraw, and in withdrawing divide the skin upwards a little, so that the finger can follow the knife; the finger dilates the opening, and finds a large cavity full of pus, with the urethra filled by the catheter lying above, almost, as it were, dissected away from the surrounding tissues. As a rule this one opening will suffice to drain the abscess, but I have had to make a more dependent opening in the buttock. The catheter should remain in about three days. I have operated in this way upon three cases—one in my own practice, a second seen with Dr. Bayfield, of Wandsworth, and a third with Dr. Herschell, of London; the patients were up and about in less than a fortnight, and no urine was ever seen by the perineal opening. In fact the ease and quickness of the recoveries from severe and distressing symptoms were remarkable.

Gentlemen, there may be none here to-night who have any feeling against the operation of internal urethrotomy, but, as I have said, I know that there are surgeons of great repute who have not accorded to this operation the position it is entitled to. I trust that they will accept this paper as a modest effort to show that there are conditions of urethral disorder where internal urethrotomy is absolutely indispensable, that there are other cases in no other way so remediable, and that with proper precautions the operation is not a dangerous one.

NOTE ON THE PATHOLOGY OF CHRONIC INFLAMMATORY DISEASE OF THE UTERINE APPENDAGES, AS ILLUSTRATED BY THE PREPARATIONS OF SIXTY-THREE CASES REMOVED DURING THE YEAR 1886.¹

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PREVIOUS to the author's first publication to the Pathological Society on December 6th, 1881, the conditions resulting from chronic inflammatory disease of the uterine appendages had been recognised as far back as the time of Ruysch, but their frequency and their serious character did not attract much attention until within the last ten years. The question of the frequency of these diseases had attracted a good deal of attention of late, but no definite answer upon this point could be given, because no method was known of arriving at a correct statement of either their absolute or relative frequency; but that these diseases were far more common than could have been imagined was seen by the fact that during the year 1886 the author had operated upon sixty-three patients, with the result of only one death in the series. The preparations from these cases he submitted for the inspection of the Society with the exception of five, four of which had been taken possession of by

the gentlemen whose cases they were or who had been present at the operations, and desired to have the preparations for the purposes of clinical instruction, and one which had been lost, but which fortunately had been previously reported upon to the Gynaecological Society by Mr. Bland Sutton.

Many of the patients had come to the author from long distances, and all of them had been suffering for years. The etiology of the conditions of the cases now described completely confirmed what the author had said in previous communications. There were four lines on which the causation of these diseases rested: first, that which may be called simply catarrhal; second, that which can be traced clearly to the influence of exanthematic disease occurring at the period of puberty; third, gonorrhoeal infection; fourth, the occurrence of inflammatory mischief in the pelvis in the post-puerperal condition, that is, either after a miscarriage or a full-term labour.

To these the author was now disposed to add a fifth, the relations of which still remain to be worked out, but the indications of which were far too clear for him to remain longer silent upon the subject. He expressed himself as having a growing experience for the formation of a distinct group of cases, in which the only explanation available of the occurrence of chronic inflammatory trouble in the uterine appendages was in the existence of an infantile condition of the uterus due to arrested development. In such cases the uterus was generally retroverted, completely fixed, and the enlarged appendages could be found on either side of it; the characters of the uterus itself were always infantile, whilst the appendages were completely disorganised by inflammatory change.

The preponderating influence of the third and fourth causes was at once indicated by the fact that out of the sixty-three cases there were only ten unmarried women. Of these ten single women, there could be no doubt that in at least three of the instances the origin was gonorrhoeal. In two of the single women there had been pregnancies, and these were, in all probability, the source of the diseased appendages. In one case, prolonged efforts had been made to cure ante-flexion by means of intra-uterine pessaries, and this doubtless resulted in the double pyosalpinx from which the patient suffered. In the four remaining single women, no conclusions as to the causes of the disease could be arrived at, though the author was inclined to regard the condition in two as probably due to scarlet fever.

In the fifty-three women who were married the average age was a little over thirty-three years; of these, twenty-three had never been pregnant, and they had been married on the average ten years. Of the remaining thirty cases sixteen had been pregnant once, the pregnancy occurring immediately after marriage, and being associated in every instance with the history of subsequent pelvic trouble, and then there was no pregnancy afterwards. The average interval in these cases between the pregnancy and the time of the operation was eleven years. Only fourteen of the patients had more than one child, and between the last pregnancy and the time of the operation was an average period of six years.

These facts were enough of themselves to show how completely sterility was produced by chronic inflammatory disease of the uterine appendages. In every one of these women the condition of the appendages was such that the patients could not by any possibility have become pregnant. In a very few of the specimens this was not quite clear now, because the tubes, in being torn from their adventitious beds, had their fimbriated extremities relieved from the field of adhesion by which their occlusion was completed. But the great bulk of the specimens still proved the completely sterilised condition of the patients, and this feature had a great pathological interest. In by far the greater majority of the specimens the occlusion had taken place by the trumpet getting glued on to the ovary. The frequency of this occurrence substantiated, to some extent at least, the tradition that the infundibulum got fastened on to the ovary temporarily at some time or other in connection with the process of ovulation. Formerly the author thought he should be able to prove that this relation did actually occur, but he had never been able to make himself certain of it.

In some cases the trumpet was found to have closed its tentacles like a polyp, and to have had them coalesced in that position, leaving the ovary free. In the group of twenty-three women who had been married for an average period of ten years and had never been pregnant, there could be no doubt, from the clinical histories of nearly a third of them, that the disease arose from old latent gonorrhoeas or gleet in their husbands, excited into activity by the indulgence of early married life. In rather more than a third the author believed the disease originated in the exanthematic diseases of girlhood, more especially scarlet fever, and in the others no clue to causation could be obtained.

¹ Read at the Pathological Society, April 5th, 1887.

In the second group of fifteen women, in whom there had been one pregnancy within a short time of marriage, we assume, of course, that at the time of marriage their procreative machinery was intact. In all but two of these cases the story of pelvic peritonitis following their only labour placed them clearly in the group in which puerperal mischief had to be regarded as the cause. In the exceptional two the author believed that he failed to get the history rather from the stupidity of the patients than from an absence of the facts.

A third group was readily formed of fourteen women whose fecundity was not limited to one child. In this group were found the most acute and severe cases. At least eight of these women suffered from sub-acute, or even acute gonorrhoeal salpingitis of comparatively recent origin, the average time which had elapsed between the last pregnancy and the operation being three years. On the other hand, in the six other women in this group in whom the author could get no such history (or doubtfully in two of them) fourteen years had, on the average, elapsed between their last confinement and the date of the operation. These facts had a striking pathological significance.

The characteristics of the diseased appendages in the second group of cases were strikingly different from those of the cases of long standing, and there could be no doubt that the changes known in other organs in the various stages of the inflammatory process were exemplified here.

In the acute or early stage the appendages were intensely congested and swollen, and were very friable. In fact, it was a matter of difficulty to remove them entire. In the old standing cases the organs were contracted and atrophied, and few, if any, traces of normal follicles could be discovered in the cirrhotic and densely adherent ovaries. At this stage the tubes generally contained very little fluid, and their contents were sometimes cheesy. They might be purulent on one side and serous on the other. Certain it was that neither the quantity of this fluid nor its pathological characters bore any definite relation to the sufferings of the patient. The pain endured in these cases was related to the adhesion of the organs and to nothing else.

The author had been much interested lately in reading a paper by Dr. Sanger, of Leipzig, in which he determines varieties of tubal disease by the application of the germ-theory, giving to the varieties names based on the kind of lowly organisms found in the contents of the tubes. Thus, when a gonococcus is found, he speaks of salpingitis gonorrhoeica; and when he finds actinomycetes, he calls it salpingitis actinomycotica. If it is characterised by Koch's bacillus tuberculosis, he records it as salpingitis tuberculosa. This kind of distinction seemed to the author to have much attraction to the speculative mind, and but little for the practical pathologist. It had, besides, the initial difficulty that it was based on a doctrine which had yet to show that it was not mistaking the phenomena of decomposition for those of disease.

Since reading Sanger's paper the author had given some little attention to the fluid contents of the tubes, and he had found already evidence that, if the distinction of varieties was to be based upon the characters of the lowly organisms found in the fluid, the possibility was that their extension would be indefinite and easily multiplied.

In conclusion, the author submitted a *post-mortem* preparation, for which he was indebted to the kindness of Dr. Littlejohn, of Edinburgh. It was an example of the simple hydrosalpinx without adhesions; and, so far as the clinical history could be ascertained, the patient suffered little or nothing, but was perfectly sterile; also an admirable drawing made by Dr. Keiller, the eminent obstetrician, of Edinburgh, and used in his lectures nearly half a century ago, which showed the condition of occlusion and distension of the tube most beautifully; also some drawings of Dr. Price, of Philadelphia, showing the ovaries and tubes in a condition of acute gonorrhoeal inflammation.

COMPARATIVE NOTES ON ROTHELN, MEASLES, AND SCARLATINA.

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THE somewhat rare opportunity of witnessing a considerable epidemic of rotheln at the commencement of last year, and one of measles in the middle of the year, among members of the same community, has suggested that a recapitulation of the most prominent symptoms in each outbreak, as gathered from notes taken at the time of observation, may be useful; and a few words upon an outbreak of scarlatina at the same time may add to their utility.

One case of *rotheln* occurred at Charterhouse in January, nine days

after the reopening of the school, the boy having contracted the malady at a children's party at Cheltenham, on January 13th, where three of his sisters were also infected. From this case (in spite of most active precautions as to isolation and disinfection) 202 others occurred, in batches, 179 of those affected being boys in the school, and 23 children or servants of the masters. From the notes of 159 cases I give the following particulars:

The period of incubation, noted accurately in 75 cases, the remainder being omitted in consequence of doubt as to the exact time of infection:

6 days in 7 cases.	12 days in 10 cases.
7 " " 3 "	13 " " 6 "
8 " " 1 case.	14 " " 11 "
9 " " 10 cases.	15 " " 5 "
10 " " 11 "	16 " " 2 "
11 " " 18 "	17 " " 2 "

The highest temperature, noted in 63 cases; in each case it happened that the temperature was at its highest point with the full development of the rash:

105° in 2 cases.	101° in 5 cases.
104° " 1 case.	100° " 9 "
103° " 2 cases.	99° " 11 "
102° " 1 case.	98° " 32 "

Injection of conjunctivæ, present in 112, absent in 47.

Catarrh of fauces and pharynx, present in 103, absent in 56. In 58 there was complaint of sore throat; in 26 the throat was admitted to be sore when the question was put; in 19 it was visibly injected, but swallowing did not cause pain.

Bronchial catarrh, present in 5, absent in 154.

Diarrhæa, absent in all.

Enlargement of posterior cervical glands, present in 75, absent in 84.

Malaise, severe in 2, marked in 7, slight in 75, absent in 73.

Delirium, present in 5, absent in 154.

Rash, very much resembling that of measles, but differing in being less dusky, in each spot "having an areola of its own before coalescence," and in appearing upon the chest before the face:

Appeared on the first day in 119 cases.

" " " second " " 39 "

" " " third " " 1 case.

Desquamation, fine and branny, usually limited to the face, in a few cases affecting the chest, in no case involving the palms or soles, present in 55, absent in 104.

Measley odour, noticeable in 5 cases, not detected in 154.

Complications and sequela, occurred in 46, did not occur in 113. "Weakness" of the eyes in 8; blepharitis in 4; styes in 1; follicular tonsillitis in 7; persistent cervical adenitis in 5 (in one case terminating in suppuration, with no detectable local cause); Eustachian catarrh in 3; herpes labialis in 4; persistent coryza in 3; laryngeal catarrh in 2; bronchial catarrh in 5; alveolar catarrh (pulmonary) in 2; albuminuria (febrile) in 2; nephritis in 1; boils in 1; purpura in 1. (All these occurred within 3 weeks of the onset.)

Previous Disease:

5 had previously had rotheln (?), 154 had not.

144 " " " measles, 15 " "

42 " " " scarlatina, 117 " "

Of the 5 supposed to have had rotheln, none had had measles; of the 15 who had not had measles, 14 contracted measles in the summer, that is, a few months after their attack of rotheln.

147 of these cases returned to their friends (after due "disinfection") fifteen days after the commencement of illness, with official permission; 11 returned earlier (none, however, before the tenth day), without official leave, but on the responsibility of their parents. None conveyed the disease to their families.

One case of measles occurred at Charterhouse in June, 21 days after the school reopened, the boy having contracted it on May 23rd, while on an afternoon visit to a house in Guildford. Seventy-six cases occurred from this boy, in regular fortnightly batches. I quote from the notes of 60 cases.

The period of incubation was 14 days in all.

The highest temperature, which in each case happened to coincide with the full development of the rash,

105° in 1 case.	102° in 8 cases.
104° " 16 "	101° " 6 "
103° " 25 "	99° " 1 case (second attack)

The day of disease on which the highest temperature occurred:

The fourth day in 47 cases.
" fifth " " 12 "
" sixth " " 1 case.