it is the capsule, not the fibroid, which is vascular, and it is to the difficulty of adequate securing of the incised capsule that the principal risk of myomectomy is due. Both our patients made a good recovery, but in both the formation of a hæmatoma was recognised.

The remaining hysterectomy was done under rather peculiar circumstances:

The subject was a rachitic dwarf on whom a Cæsarean section had been done in 1895. When she came to us she was about four months' pregnant, and finding her true conjugate to be only 1½ inch, it was decided to let her go to term and then deliver her by abdominal section. She was thus delivered of a living boy, and the recurrence of pregnancy was, we thought, prevented by double ligature of both Fallopian tubes and incising them between the ligatures. The uterus was not removed at the time, as it was thought this would add greatly to the shock of the operation. Her recovery was uneventful and rapid. She left the hospital quite well at the end of a month. The child subsequently died at the age of 6 weeks of infantile syphilis. The mother continued to menstruate regularly, very profusely, and with great pain. The uterus remained imperfectly involuted, and of course an abdominal organ, the neck only being felt *per vaginam* just above the narrow conjugate. It was found impossible to curette the uterus, and yet the girl was incapacitated by the monthly pain and hæmorrhage. There was nothing unusual in the hysterectomy except that the anterior surface of the uterus was firmly adherent to the under surface of the peritoneum. Patient left the hospital for the convalescent cottage on the twenty-first day. Probably three causes continued to prevent perfect involution: 1. Specific endometritis. 2. Unnatural position of the uterus due to pelvic deformity. 3. Adhesion of the scar on the anterior surface of the uterus to the peritoneum.

The ovaries and tubes were removed—one or both—13 times for conditions other than ovarian cystomata. Of these, 7 patients had pyosalpinx, 5 chronic inflammatory disease with cystic ovaries, and one multinodular fibroid. The cases of pyosalpinx were naturally the gravest of this group, and, more frequently than any other abdominal operation, were followed by signs of general systemic infection. Thus, from the headnotes of the cases we find:

Mrs. R., operation October 22nd, 1895. Central incision; much thickening and matting; organs at first unrecognisable. Uterus found to front and right. Left tube contained pus and was removed; right ovary and tube adherent in pelvis, not enlarged, not removed. Drainage tube used. A pint and a-half of saline injected into arm after operation. Patient became cyanosed and had a rigor soon after being put to bed. Two days after operation bronchial breathing heard at angle of left scapula and crepitations just above. Sputa almost entirely purulent. Eventually a good recovery. Discharged January 2nd, 1896. Readmitted March 17th, 1896, on account of tender swelling in right broad ligament. Second section March 27th. The right tube and ovary dilated and closely adherent; removed. The patient did well, and was discharged on April 17th, 1896

Mrs. W. October 6th, 1895, unattended miscarriage at third month of pregnancy; much pain on fifteenth day, severe flooding with very large clots. This was repeated on the twenty-first day. Admitted New Hospital for Women, medical side, on November 9th, nearly five weeks after the miscarriage. Uterus size of three months' pregnancy. Temperature raised, pulse 120. The os uteri admitted tip of finger, and through it a polypoid mass was felt. Curette removed quantity of hardened placental *débris*; uterus packed with iodoform gauze. In the evening rigor, temperature 105° F., fell to 100° after intrauterine douche.

November 14th. Tumour felt per abdomen midline midway between pubes and umbilicus and filling right iliac region.

November 18th. Rigor; temperature 105°, pulse 132. Patient lying with legs drawn up, much pain in abdomen and legs, very sick.

November 19th. Rigor; temperature 103.8°.

November 20th. Temperature 104°. Abdomen does not move well on respiration; tenderness acute. Transferred to surgical side.

November 21st. Seen by Dr. Cullingworth, who agreed that there was puerperal pyosalpinx and advised immediate operation, although not sanguine as to result.

November 22nd. Operation; peritonitis; many recent adhesions; double pyosalpinx; pockets of pus amid adhesions; appendages removed; pelvic peritoneum sponged out with 1 in 2,000 sublimate lotion; drainage tube used.

November 25th. Pleurisy left side.

November 28th. Pelvic abscess; pus discharged along side of tube.

November 29th. Drainage through into vagina effected; bladder injured.

December 2nd. Signs of consolidation of left lung. Temperature 104.2°, pulse 140, respirations 40.

December 9th. Aspiration of left pleura; fluid withdrawn chiefly serous, but depositing pus on standing.

December 19th. The thoracic signs seemed to indicate an empyema, and the exploring needle was withdrawn filled with pus; 2 inches of rib were resected, but no pus appeared, and careful digital exploration failed to find the abscess cavity. No improvement in thoracic or general condition, very little in pelvic or abdominal.

January 3rd, 1896. Half a pint of pus ejected by coughing; this continued. Examination of pus showed no tubercle bacilli, but swarms of streptococci. From this time improvement was slow, but steady. The pulmonary abscess emptied itself by coughing. The abdominal and pelvic conditions became healthy, and finally patient went to convalescent home on March 18th with the wound healed, all her functious normal, and with neither cough nor expectoration. She has been seen several times since in good health.

After such stormy cases it is quite a relief to turn to the uniform progress of the nine patients after ovariotomy. Among them were two cases of dermoids; and one, a very easy operation, with an otherwise uneventful recovery was complicated by phlegmasia of the left leg.

Operations on the kidney were three—two nephrectomies and one nephrolithotomy. The two nephrectomies are not open to the charge of undue haste. One was needed in a case where a nephric and perinephric tuberculous abscess was opened through the loin in March, 1894. Since that time the sinus had discharged, and the patient was much worn down and emaciated. The atrophied remains of the kidney were removed through a Langenbuch's incision. The operation was tedious owing to dense adhesions, but the patient did well.

The second patient who was subjected to nephrectomy was originally admitted in July, 1894, complaining of pain in the left side for two years. There was an enlarged left kidney and pyuria. Nephrotomy was performed on August 2nd. A dilated sacculated kidney filled with pus was found but no stone. Readmitted March 6th, 1895, when two stones were found and removed, a fluid being spontaneously discharged; the sinus did not heal. In August, 1895, two more stones were removed from the kidney.

In June, 1896, lumbar nephrectomy was done. The kidney was found completely disorganised, and contained a number of small stones in a sacculus at the lower end. The patient did well, and was discharged after six weeks with a sinus which has since healed.

The nephrolithotomy was done for a patient who complained of pain in the right side for three years, and had had several attacks of renal colic. There was much pus and albumen in the urine but no fever. The kidney was incised from the loin; 16 ounces of purulent urine escaped. A rough three-branched stone, phosphatic on the outside, was extracted whole; one of its branches had rested in the ureter the others in calyces of the kidney. A probe passed down the ureter showed it to be patent. The patient made a very smooth and perfect convalescence.

### Radical Cures.

Radical cure was done once for a small umbilical hernia, the sheaths of the recti being opened so as to admit of their being carefully stitched in the median line. There were four inguinal and three femoral herniæ submitted to this operation. Among these was a woman aged 72. She was a shopkeeper and of very active habits. The hernia had existed twenty years, and only for one year had been troublesome with attacks of pain which prevented her from doing her work. The hernia proved to be partly omental and partly enteric, the former portion being irreducible. It was removed with the sac. The patient made a good and rapid recovery, and went home at the end of a month free from pain.

## CASES OF FOLLICULAR TONSILLITIS DUE TO MILK INFECTION.

BY

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### I.—Clinical Observations by Dr. C. Grey-Edwards.

On February 12th, 1897, I was called to a farm to see two children and a servant. They were all sitting up, and complained of general pains about various parts of the body, headache, "chilly feelings," etc. No direct complaints were made about the throat, but my inquiries elicited that "it was a little sore." On inspection, I found the tonsils enlarged, red, and spotted with the soft creamy membranous patches typical of follicular tonsillitis. The temperatures ranged from 100° to 103° F., and in each case about three days elapsed before they had come down to normal. In the case of the maid there was considerable prostration and languor; she was quite unable to work for three weeks.

Between February 12th and 24th I attended three more cases, and four other cases occurred which I did not see.

On February 20th I was called to another house, and here saw a similar case of follicular tonsillitis—that of a young

girl with exactly the same type of throat, whose temperature was as high as 104°. As the milk was supplied from the farm where the first cases had occurred, I recommended that all the milk used should be carefully boiled, and also that the case should be isolated as much as possible and every precaution taken to guard against a spread of the malady.

On February 26th there were two fresh cases, and I then sent a specimen of some of the suspected milk to the West End Pathological Laboratory in London for bacteriological examination. The report, exclusive of the technical detail, was as follows:

1. Staphylococcus pyogenes aureus—present.
2. Staphylococcus pyogenes albus—present.
3. Streptococcus pyogenes (short form)—present.
4. Bacillus diphtheriæ (Klebs-Loeffler)—absent.
5. Bacillus tuberculosis—absent.

On March 1st I saw another case from the same house, and sent a sweeping of the throat for examination. The same bacteria were found as in the milk. Three of the cases in this house had partaken of the milk, but the fourth had not; and I consider it probable that infection took place from one of the other three cases in the early stages. Three children, between the ages of 2 and 3, escaped altogether, owing, I believe, to the fact that their milk was invariably boiled.

In addition to the above cases I was called in to one more, a throat of the same character, and here again milk had been partaken of, which had been supplied from the same farm.

On receiving Mr. Severn's report on the first specimen of milk, I induced the farmer to have the cows examined by a veterinary surgeon, who however failed to detect anything wrong, and it was not until the milk from all the cows had been separately examined that the offending animal was discovered. In the milk from this cow were found the same organisms as were present in the first specimen of milk and in the sweeping from the throat.

II.—Bacteriological Evidence by Walter D. Severn.

It is seldom that one obtains such exactly correspondent results in bacteriological research as have been obtained in Dr. Grey-Edwards's epidemic of follicular tonsillitis.

In examining the first specimen of milk, plate and Petri dish cultivations on gelatine, agar-agar, and glycerine agar-agar were poured immediately on arrival, and large surfaces of Kanthack-Stephens' medium and serum were well rubbed over with heavy platinum spatulæ and incubated at 37° C. Portions of the milk were also placed in sterilised strong glass tubes and rotated on a motor centrifuge, and from the resulting deposits after treatment with ether, etc., cover-glass preparations were stained and examined for tubercle bacilli and bacilli diphtheriæ with negative results. Other cover-glass preparations stained by the Gram-Weigert method were found to contain a few organisms resembling morphologically the pyogenic cocci. Numerous short and long rod forms were also present, but most of these latter were very faintly stained. In the deposits from this specimen, in addition to the epithelial *débris* and leucocytes of the form usually found in cow's milk, there were present true pus cells, variable in shape and dimension, multinuclear, and fairly numerous.

Staphylococcus albus was the organism which greatly predominated in the first specimen of milk, the streptococcus brevis was fairly numerous, while staphylococcus aureus only appeared to the number of three very distinct small orange colonies on a plate poured from 0.2 c.cm. of the milk.

Of the two infected specimens of milk examined, this first one was by far the richer in cocci, but it also contained rather numerous decomposition bacteria, including bacterium lactis, owing to its not having been taken with any special precautions as to sterility. The gelatine plates, which were as low as attenuations from a loopful of milk, were not rich enough in colonies of the organisms sought for, while the bacillar forms present were, even at these high dilutions, too numerous. In such cultures as could be incubated at 37° C., the temperature hastened the development of the pathogenic cocci, at the same time inhibiting the contaminating bacteria, isolation becoming fairly easy.

In the case of the throat-sweeping, no plate cultures at all were attempted. The rather large brush which was used appeared somewhat dry on arrival at the laboratory, so it was moistened with sterile water, and well rubbed over, in the following order: (1) A large glycerine agar surface; (2) a large, plain, faintly alkaline agar surface; and (3) a surface of serum. Incubation took place at 37° C., and the same organisms were found again, but only two colonies of staphylococcus albus were present. Some colonies of micrococcus citreus were easily distinguished by the size of the cocci, and by the non-liquefaction of gelatine, from staphylococcus pyogenes citreus.

The last specimens sent consisted of one of water from a well on the farm in question, and three different specimens of milk labelled each with the name of the cow which produced it. The water was carefully examined by plate culture, and may be dismissed at once as a very good water, with no suspicious feature (bacteriologically). Two of the specimens of milk were also free from suspicion. The bottles containing the milk were sterilised, and the specimens were taken with certain aseptic precautions; it was probably owing to this care that in the two specimens just mentioned very few colonies indeed appeared, even of aërial or putrefactive bacteria; the task of working up the colonies was thereby greatly simplified.

In the milk of the third cow, which we may regard as the one to which the infection has been definitely traced, the two staphylococci and the streptococcus were again found. They were, however, apparently not so abundant as in the first specimen of milk examined, and the staphylococcus albus had almost disappeared. At a rough estimation I should think that the pus was not correspondingly diminished in quantity.

In conclusion, I would like to emphasise the necessity and usefulness, in such examinations, of cultures made by rubbing the surface of already cooled and set agar plates with a small quantity of the milk or other suspected fluid, in addition to the ordinary plate cultures. Agar-agar of a high melting point is sometimes very difficult to maintain sufficiently fluid throughout at any temperature which is not distinctly inhibitory to pyogenic cocci at their first critical transition to saprophytic growth. It is also necessary to make quite sure of the identity of any cocci found by morphological appearance and aggregation, by staining reactions and by careful micrometer measurement, by culture characteristics, and finally, if necessary, by inoculations.

# MEMORANDA:

## MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

### TWO CASES OF "CHRONIC FOLLICULAR TONSILLITIS" IN WHICH THE TONSILS WERE HIDDEN BY AN EXPANSION BACKWARDS OF THE ANTERIOR PILLARS OF THE SOFT PALATE.

Case I.—Mr. B., aged 39, first consulted me on February 10th, 1897; he stated that two years earlier he had had an attack of influenza and "drain-poisoning," and had never been well since, his throat having caused him constant trouble.

He was anæmic and ill, had a foul breath, a sore throat, and enlarged submaxillary glands. Upon at first inspecting the throat, the fauces were found much swollen and congested, but nothing more. After a closer examination, however, it was discovered that the tonsils were completely hidden by the expansion and folding backwards of the anterior pillars of the soft palate; a curtain, so to speak, being drawn over each tonsil respectively, and thus concealing them. Upon drawing this curtain forwards by means of a small retractor, there was exposed to view on each side an extensive "caseous tonsillitis."

The lacunæ were evacuated of their secretion and concretions, the tonsillar crypts being opened and freely curetted; the tonsils were syringed with hot boracic lotion, and afterwards swabbed with glycerine of carbolic acid during retraction of the anterior pillars; a generous diet was prescribed, together with a mixture containing sodium benzoate, gr. xv, and citrate of iron and ammonia, gr. x, and a pill containing quinine sulphate, gr. ii. The patient was instructed to paint and syringe the tonsils twice daily with weak solutions of