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### CLINICAL LECTURE

UPON A CASE OF MITRAL VALVE DISEASE.

Delivered at the General Hospital, Feb. 26th, 1890.

By R. L. MACDONNELL, M.D.,

Professor of Clinical Medicine in McGill University; Physician to Montreal General Hospital.

GENTLEMEN, -At our visit the day before yesterday we examined together a new arrival into the clinical wards, Jean F., whose history is instructive and interesting. You had an opportunity of hearing him tell his own story, and we examined together the physical signs presented. To-day I propose to resume the study of the case. F- is an old country Frenchman, aged 50. He is intelligent, and gives a well-connected personal history. He has led a roving life, having been a soldier in the French army, subsequently a miner and western adventurer, and now he describes himself as a teacher of languages, having in his travels learnt Spanish, German and English. So far as we can learn he has never been intemperate, nor has he ever had syphilis. In childhood he had scarlet fever, and he has suffered from three attacks of rheumatism—the first at the age of 20, while a soldier; again in 1871 he was laid up for three months, and lastly in 1886 while he was working at the silver mines in New Mexico he was exposed on one occasion to great cold, and immediately afterwards was attacked with pain in nearly all the joints. This illness lasted nine months, and he understood from his medical attendant that it was of the nature

of acute rhoumatism. During the course of the attack, after he had been ill some three or four months, he became suddenly paralysed in the right side of the body. He was aware, previously to this attack, that the heart had been affected by the rhoumatism.

You know that in the course of acute rheumatism, in a large proportion of cases, probably in as many as fifty per cent., the morbid process attacks the valves of the heart, being particular in nearly every instance to select the mitral valve. Rheumatism is the usual cause of endocarditis, and in that disease certain changes take place in the valve. The smooth, glistening surface becomes vascular and roughened by an exudation leading to a deposit of fibrin. The process may be likened to the freezing of a river: the ice tends to form upon rough projections, shallow bays, rocks, in fact anything that presents an obstacle to the rapid current, while in deep places, up against smooth embankments and wharves ice does not so readily form. The fibrin of the blood is not only always ready to deposit itself upon a rough surface, but in acute rheumatism it is put into a condition in which coagulation is especially prone to occur. A deposit of fibrin, then, having taken place, a piece of it becomes detached, enters the circulation, and is carried from the big arteries to the little arteries, until it finally sticks in one of them, usually a cerebral artery. This is by no means an uncommon occurrence. Disease of the valves of the left side of the heart is most frequently the starting-point of this embolism. Here paralysis of the opposite side was the result. The vessel in which the clot is arrested is almost always one of the Sylvian arteries. It was formerly commonly taught that the left artery was more liable to plugging than that on the right, but this, it appears, is not the case, or at least it has not been confirmed by Fagge's observations in the post-mortem records of Guy's Hospital. Among twenty-one cases of embolism limited to the Sylvian artery of one side, he found that there were eleven in which the left one was affected and ten in which the clot entered the right artery.

The immediate result of plugging of the Sylvian artery, if that, indeed, was what occurred, was to shut off the blood from those parts of the brain in which the motor fibres of the right side of

the body take their origin. There was a sudden cessation of nutrition in the affected area, equivalent to a traumatic irritation, and paralysis was the result. Recovery was slow, but at the end of nine months he found himself upon his feet again.

Possibly the attack of rheumatism in 1886 may not be alone to blame for the endocarditis and the embolism. He was 46 in 1886, and rheumatism does not often, in fact you may say it never affects persons at this age unless they have had previous attacks. Nor is at all likely that the attack in question gave rise to the endocarditis. The tendency to endocarditis diminishes rapidly with age, especially after the thirtieth year, and more particularly in men, since women are more subject to the cardiac complications of rheumatism than are men. It is probable that the original endocarditis dates from one of his earlier attacks of acute rheumatism, and that in 1886 it took on fresh action, and this is rendered likely from the observed fact that embolism is specially apt to occur when valves previously the seat of disease undergo a fresh attack of acute endocarditis.

For the next three years he seems to have been in fairly good health, but notice that his occupation was no longer active, but was sedentary, and he became a teacher of languages. He never felt as strong since that attack of rheumatism. On the 22nd of December last, after partaking of an unusually good dinner, he suffered his first attack of palpitation and pain in the precordial region. The abdomen and the feet became swollen at night, and it was with great difficulty that he could attend to his daily duties. On the 14th February last, twelve days ago, he was obliged to take to bed. So far he has complained of the three symptoms of mitral regurgitation—(1) Pain. (2) Palpitation. (3) Dyspnæa on exertion.

State on admission.—It is evident at a glance that some serious disturbance of the circulation exists, for his general appearance and decubitus is that of a man who is suffering from dyspnea. He sits up in bed, and in his conversation with me you observe his breathleseness. The face is pale, and there is a slight degree of cedema in the lids. The superficial arterics, the temporal and the carotid, do not pulsate visibly, but the veins

in the neck are in a state of active pulsation. The conjunctive are subicteroid. The abdomen is evidently enlarged and the feet are edematous. He complains of uneasy sensations and pain in the precordial region, especially over the right hypochondrium. The temperature is normal. The pulse small and weak, but not irregular. Respirations are 28 to the minute. Over the precordial region we notice a general diffuse impulse, but the exact position of the apex cannot be made out. No thrill is perceptible. The area of superficial dulness is increased. It begins at the third costal cartilage above, extends to a point about an inch beyond the nipple and an inch below it, and on the right side it corresponds with a line one inch beyond the right edge of the sternum. The outline is made out with difficulty. The heart is evidently enlarged, and particularly on its right The absence of perceptible apex-beat is probably the result of right heart dilatation, which would push the apex away from the chest-wall. The pulsation in the veins of the neck shows there is leakage through the tricuspid orifice. This is a common result of disease beginning in the left side of the heart, not because the tricuspid valves become diseased, for it is rarely that they are ever attacked by endocarditis, but because the walls of the right heart become involved in the general deterioration of the muscular structure of the whole organ. The worst feature in the case is the presence of this tricuspid regurgitation, which shows that the endocarditis has gradually affected the heart structures, travelling backwards in the course of the circulation from the mitral to the tricuspid valve. At the apexbeat the sounds are regular but weak. The first sound over mitral area is replaced by a murmur, which can be heard around the chest as far as the boundary of the axilla, but it is not heard in any other than the mitral area. It is distinct, but not loud.

State of the lungs.—In diseases of the heart, the state of the lungs is of more or at least of equal importance to the state of the heart, because valve affections most commonly kill by interference with the lungs. The degree, therefore, to which the lungs are affected measures to a certain extent the dangers of the case. The respirations are quick and shallow. There is slight

cough. Both pulmonary bases are dull for a limited extent, and from the spines of the scapulæ downwards fine crepitating râles can be heard. There is therefore a moderate degree of pulmonary ordema. The lung changes are not as advanced as you might expect when you take into consideration the generally deranged condition of the circulation. The reason for this lies in the fact that the occurrence of tricuspid regurgitation tends to relieve pulmonary congestion, inasmuch as it weakens the force with which the right ventricle contracts. Consequently less blood is pumped into the lungs, because we see the veins in the neck receiving at each beat of the right ventricle some of the blood which ought to go to the lungs.

The appetite is poor; the bowels fairly regular. He complains of pain in the epigastrium and right hypochondrium. is no vomiting, and he has never brought up blood. abdomen is distended and measures at its widest part 37 inches. Fluctuation is present. There is dulness on percussion in both flanks, which is moveable on the right side. but not so on the left, owing probably to enlargement of the There is no fluctuation. Note the rapid onset of this abdominal dropsy, which is the immediate result of the regurgitation through the tricuspid. The abdomen suffers first, or nearly first, when this takes place because of the absence of valves in its veins, and this damming up in time acts on the portal circulation, producing symptoms due to the inability of organs to clear themselves of their blood. Congestions ensue, function is interfered with, and symptoms result. The pain and distress at the stomach of which this poor man complains is probably the result of the damming back of the blood in the gastric veins. liver is large. Hepatic dulness in right mammary line extends fully three inches below the margin of ribs. The smooth surface of the organ can be readily felt separated from the abdominal wall by a thin layer of fluid. The spleen is large, possibly as the result of the old standing malarial disease, possibly as the result of the congestion from which it is evident all the viscera are suffering.

The quantity of urine passed is less than the normal. Since

his admission but some twenty or thirty ounces are voided daily. The fluid is high-coloured and cloudy; contains a whitish deposit which microscopical examination shows to consist of phosphates. The reaction is alkaline; sp. gr. 1025; no sugar; no albumen. Considerable bile pigment. After he had been in hospital a few days the bile pigment almost entirely disappeared. He is the subject of a right inguinal hernia and there is a discharging sore upon his right tibia.

Such is an outline of the history of the case before us. The sequence of events seems very plain.

- 1-Rheumatism.
- 2-Endocarditis.
- 3-Embolism and hemiplegia; recovery.
- 4-Enfechled health.
- 5-Compensation and restoration to comparatively good health.
- 6—Failure of compensation, shown by precordial pain, palpitation, dyspnoa, cough, symptoms resulting from congestion of abdominal organs, general anasarca.

General effects of valuular disease.—Regard the circulatory and the respiratory system as one machine. Interference with that machine at any point produces a disarrangement of the whole, more especially is this the case when the part disarranged, as in the case of the heart, is the one which is so situated as to be a central point to all the machinery by which the body works.

The general effect of all valcular lesions, no matter where they may be situated, is to enrich the venous and impoverish the arterial systems.

In front of the lesion there is too little blood and behind it there is too much; e.g., mitral valve lesions cause—

- 1-Increased pressure in left auricle.
- 2-Diminished pressure in left ventricle.

Therefore less pressure in aorta.

3—Back pressure is increased and extends to the pulmonary veins.

Therefore the first effect of mitral lesions is to impede the pulmonary circulation.

Compensation .- In the progress of a case of valvular lesion

there is a double process at work, a process of injury to the system and a process by which this injury is minimized, and to this latter we apply the term "compensation," which, it may be stated, generally consists in hypertrophy of the cavity immediately behind this lesion.

What occurred in this case after the mitral valve became incompetent?

- 1. Dilatation of left auricle.
- 2. Hypertrophy of the same.
- 3. Circulation in lung impeded.
- 4. Increased tension in pulmonary artery.
- 5. Dilatation of the right ventricle.
- 6. Tricuspid regurgitation.

When the compensation begins to fail, the cavities which are behind the valves begin to dilate. This may be checked and the power of the heart restored for a time. Changes then occur in the nutrition of the cardiac muscle, in the vessels, and in the general nutrition, bringing on failure of compensation. In this state the cavity has no longer power to expel its contents fully into the vessels, so it becomes increasingly distended and structurally deteriorated.

Symptoms of failing compensation.—1. Attacks of palpitation from slight causes, or even during sleep. In this case an over-distended stomach was the exciting cause. Remember that a deranged stomach can cause a derangement of the heart in two ways. By its bulk it can press upon the heart and hamper its action, and through its nerves it can derange those of the heart. You remember that the vagus goes to both.

- 2. Irregularity of pulse, due to abortive contractions which do not reach the wrist, or to contractions unequal in force or in the quantity of blood expelled. The pulse becomes small, unequal, irregular and compressible.
- 3. Cardiac oppression and anginal attacks from distension of the cavities of the heart.
  - 4. Faintness and giddiness from cerebral anæmia.
- 5. Visceral complications. Lungs—Remembering that valve lesions act backwards, you can understand that in mitral incom-

petence the lung vessels are in a chronic state of engorgement which gives rise to a hypersecretion of mucus—i.e., a state of chronic catarrh. This over-pressure acts upon the walls of the vessels, which become dilated and varicose; hence there arise codema and hæmorrhages. This is specially the case in mitral stenosis. Repeated attacks of this kind bring about a condition of lung known as brown induration. The varicose condition of the vessels in the alveoli interferes with oxidation and aids in the deterioration of blood which the other visceral congestions favour.

The state of the Liver .- As there is general venous stasis, the blood which passes from the liver to the inferior vena cava is impeded in its flow and a passive congestion of the liver is the The organ assumes that condition to which the term 'nutmeg' is commonly applied. It is at first large, but eventually shrinks in very chronic cases to half its size, and it may, like true cirrhosis, set up an ascites. As a result of this passive congestion of the liver catarrh of the tubes is set up and jaundice is thereby produced. There was a subicteroid conjunctiva when the patient was admitted and bile pigment was found in the urine. Similarly, hæmorhoids and epistaxis are prone to occur. Further results of the chronic congestion of the liver show themselves in other branches of the portal vein, and as a consequence, congestion and chronic catarrh of the stomach and intestines, which impede digestion and assimilation. The spleen is always ready to undergo enlargement, and when the liver becomes passively congested the return of blood by the splenic vein is impeded and splenic enlargement is the result.

Kidneys.—When the mechanical effects of valvular disease extend to the general circulation, the function of the kidneys is more or less disordered. Valve diseases fill up the veins at the expense of the arteries. Lessened arterial tension is the first stage, and as a result it makes itself felt in the Malpighian tufts and scanty, dense, high-colored urine is the result. When the venous stasis becomes general a further change takes place in the urine. The arterial anemia still keeps it scanty, but the venous stasis leads to the transudation of serum, and albuminuria is the result. Long-continued congestion leads to structural

changes—hyperplasia of connective tissue and degenerative changes in the tubules. In advanced cases uramia is added to the patient's troubles.

Brain changes.—Coarse lesions are not found in the brain unless a detached clot plugs a vessel and gives rise to symptoms, but the brain substance generally is codematous and the membranes are thickened. Delirium amounting to mania is an occasional symptom in the course of heart disease, and when present is of very evil import. We have had recently in our wards several cases in which maniacal symptoms appeared in the course of valvular lesions. The blood-vessels of the general circulation are frequently affected with atheroma when the left ventricle is hypertrophical, and hence the likelihood of cerebral hæmorrhages-

Treatment.-In the complication of evils present one would suppose little relief could be afforded, but fortunately we have at hand the means of alleviating a great deal of suffering. The nurse has provided him with a bed-rest, by means of which he can rest fairly comfortably. We began with free purgation with calomel. Two grains every two hours were given until the bowels acted freely. In this way good was done in various directions. The intestines were unloaded, the congestion of the gastro-intestinal mucous membrane was relieved, and as calomel is a diuretic under certain conditions, it probably reduced the dropsy as well. There was certainly much less fluid in the peritoneum after the action of the calomel. Having cleared the way, I prescribed fifteen minims of tincture of digitalis to be taken every four hours. The night before last there was very urgent dyspnæa, and Dr. Campbell succeeded in affording relief by very freely dry-cupping the back.

Postscript.—The course of the case was at first satisfactory, though the stomach was very irritable and it became expedient to suspend the administration of the digitalis. At the end of three weeks there was considerable improvement—the dyspnæa was not so urgent, the anasarca was less, more urine was passed, and he was able to sit up and move about the ward. But this happy state of affairs did not continue, for on the 15th of April, after he had been 57 days in hospital, dyspnæa set in (respira-

tions 40), and cough became troublesome. Expectoration was very copious. The temperature rose. Signs of fluid were detected at the left base, and a pint of pus was withdrawn by the aspirator. Three days later a second aspiration was performed, but now his strength seemed unequal to this new strain and he became rapidly weaker, and died upon the 21st April.

In the main the autopsy verified the diagnosis. There was chronic valvular endocarditis with hypertrophy and dilatation as had been supposed, but there existed in addition chronic adhesive pericarditis. The liver and spleen were not so large as would be expected from the physical signs. The former was of a decidedly nutmeg character. There was a localized peritonitis in the hepatic region, which probably accounted for the pain in the right hypochondrium the patient complained of when he was admitted. The left pleura was the seat of an acute fibrino-purulent pleurisy.

#### TWO CASES OF PHLEBOTOMY IN PNEUMONIA.

By Dr. Stanley S. Cornell, Athens, Ont.

Case I.—M. W., farmer, aged 23 years, of sanguine temperament and excellent family history, while plowing, about five o'clock in the afternoon of May 3rd, 1889, was suddenly seized with a severe chill, accompanied by a sense of weakness and by vertigo. Having remained supported against a fence for half an hour, he was conveyed home by his father. About an hour after the occurrence of the rigor I visited the patient. He was lying upon his back, with his neck well extended, and breathing rapidly. The temperature, taken in the axilla, was 104°F.; the pulse was 124, strong and full. Upon inquiry, no history of recent cough, of undue exposure, or of antecedent debility could be obtained; the symptoms having occurred with an awful suddenness that rendered the young man oblivious to all wants except his need of air.

A physical exploration of the chest revealed the evidences of normal lung-tissue over all regions except an extremely small area in the right infra-scapular division, where, upon inspiration, the dry clicking of crepitant râles was distinctly audible. Percussion over this region failed to elicit the smallest degree of dulness.

Treatment.—Sixteen ounces of blood were withdrawn from the left median basilic vein. Immediately the respirations lessened, the pulse became soft and beat less rapidly, the systemic oppression subsided, and the skin became moist with perspiration. Five grains of sulphate of quinine, in two tablespoonfuls of milk, were directed to be given at intervals of three hours during the night.

May 4th, 9 a.m.—The patient has rested comfortably during the period that has elapsed since 6 p.m. last evening. Temperature 98.5°F.; pulse 84, of small volume and low tension. The skin is moist, the tongue moist and coated, the bowels moved once during the night, and the general feeling is one of improvement. Five grains of sulphate of quinine to be given every five hours. 9 p.m.—Temperature 99°F.; pulse 86, soft and small. A severe coughing has just resulted in the expectoration of a considerable quantity of tough, fibrinous material stained with reddish-brown streaks that impart a rusty hue. Auscultation elicits subcrepitant rûles over the site yesterday occupied by the crepitant rûles. A draught of milk to be given whenever desired by the patient.

May 5th, 9 a.m.—The patient has passed a comfortable night; sleep has been refreshing, and nourishment so eagerly sought for that liberal quantities of milk have been given every three hours. Auscultation and percussion are affirmative of complete resolution in the pulmonic area involved on the 3rd inst. Temperature 98 5F.; palse 80, large and soft.

The patient was dismissed with a tonic of iron and quinine to be taken after meals; walked about on the 6th of May, and resumed work on the 17th.

Case II.—R. G., a farm-hand, aged 21 years, had been feeling unwell for a week. During this period he had experienced a weakness gradually overcoming him, accompanied by breathlessness upon slight exertion, and preventing his engagement in

heavy work. On June 22nd, 1889, a chilliness seized him, and was followed by fever, dyspnoxa, and cough. I visited him the following day.

June 23rd, 4 p.m.—The patient lies upon a couch on his right side; his face is flushed a deep crimson; respirations 24; temperature 103.6°F.; pulse 110, small and compressible. He coughs frequently, each paroxysm lasting a considerable length of time, and being attended by the expectoration of frothy mucus containing an admixture of pus.

Physical signs.—The right lung from apex to base, anteriorly and posteriorly, is involved in the exhibition of mucous, submucous and subcrepitant râles, and some loss of resonance in the percussion note. The left lung exhibits greater volume and higher pitch in the inspiratory and expiratory murmur, and a percussion note so much exaggerated in resonance as to be vesiculo-tympanitic. There is anorexia; the tongue is covered with a white fur which extends from tip to base; the abdomen is tympanitic and the bowels are constipated. The urine is scanty and high-colored.

Treatment.—Eight ounces of blood were abstracted from right median basilic vein. This procedure was followed by an immediate increase in the volume and tension of the pulse, by relief of dyspnæa, and by copious perspiration. Five grains of ammonium carbonate to be given every three hours until my next visit.

June 24th, 5 p.m.—Patient feels no discomfort except that which arises from frequent coughing and abundant expectoration. Temperature 101°F.; pulse 98, of large volume and firm tension.

Physical signs.—The respiratory acts are less accompanied by moist râles than yesterday, the murmurs possessing greater length, greater volume, and higher pitch. On percussion, the right side of the thorax imparts normal resonance over all portions except a small area in the infra-scapular region, where the note still manifests diminished resonance.

Treatment.—Five grains of potassium iodide every third hour. Copious draughts of milk, and meat, potatoes, toast and ten whenever wished for.

June 25th, 3 p.m.—Since my visit yesterday, the patient, desirous of change, walked, unaided, from the ground floor up a stair of fifteen steps, and placed himself upon a bed near an open chamber-window. He professes to feel very much invigorated by the exercise, and to derive much benefit from the fresh air of his new apartment. Were it not for the weariness induced by paroxysms of severe coughing and some difficulty experienced in urinating the patient would consider himself able to go about his usual work. But the principal factor in the causation of systemic fatigue is to be found in the anæmia so fully represented by pallor of the countenance and of the conjunctival, buccal and nasal mucous membranes. Temperature 99°F.; pulse 86, of medium volume, and soft. The physical evidences shown by the stethoscope are: ráles lessened in size and number; greater volume and pitch of the respiratory murmur; normal resonance upon percussion. All these qualities pertain to the right side.

Treatment,—Quinine and mineral acid before meals. Dismissal.

This patient was heard of in two weeks as doing his work on the farm, although weakness attended him.

# Betrospect Department.

#### QUARTERLY RETROSPECT OF OBSTETRICS.

PREPARED BY J. CHALMERS CAMERON, M.D.,
Professor of Obstetries, McGill University; Physician-Acconcheur to the Montreal
Maternity, &c.

The Value of Deep Incisions in the Cervix, Vagina and Perincum in difficult cases of Labor.—(Archiv für Gyn., Bd. xxxvii, IIft. 2.)—Dührssen writes very enthusiastically of the great value of incisions in certain cases of protracted labor where delay is caused by imperfect dilatation of the external os uteri. Artificial dilatation in such cases may be indicated (1) to permit the termination of labor by the natural forces, (2) to prevent threatened cervical tearing, or (3) to make possible an immediate delivery by operative measures. He tabulates the cases in which incisions are likely to prove useful as follows:—

- 1. Closure of the os through atresia.
- 2. " " agglutination. 3. " rigidity of os.
- 4. Imperfect dilatation from rigidity of the portio vaginalis.
- 5. " " feebleness of uterine action.

He reports 10 cases in which his method was employed. Of the 10 children only 1 died of asphyxia, although several were born deeply asphyxiated. If incision had not been practised, craniotomy would have been inevitable in several of these cases, and in others the child would probably have perished from the amount of force necessary for extraction. The conclusions which Dührssen draws may be summarized as follows:

- 1. In the imperfectly dilated os uteri, incisions are to be made in its margin only if the supra-vaginal portion is fully dilated. Incision is indicated chiefly in primiparæ; in multiparæ only if the vaginal portion is abnormally rigid or cicatricial.
- 2. Multiple superficial incisions of the external os in cases of atresia or conglutination are indicated if dilatation does not take place.
- 3. If, on account of rigidity of the portio, the partially dilated os does not dilate any further in spite of uterine action, then chloroform should be given, and if the os still remains undilatable, superficial incisions should be made.

- 4. Careful antiseptic precautious remove the danger of woundinfection, even if labor is protracted.
- 5. Where there is urgent necessity for the immediate termination of labor in behalf of mother or child, deep incisions must be made in the cervix up to the vaginal insertion. Two or three generally suffice to open the os completely; one upon each side and perhaps a third behind. Very little blood is lost; they do not tear deeper during the progress of labor and are not liable to infection if antiseptic precautions are adopted. By these deep incisions the maternal and feetal mortality is reduced in old primiparæ, in premature rupture of the membranes, in prolapse of the cord eclampsia or placenta prævia in primiparæ, in version followed by immediate extraction, and in flat or generally contracted pelves where turning or the high forceps operation is to be done.
- 6. A speculum is not necessary. Two pairs of bullet forceps keep the part to be incised steady and on the stretch. The incision is made with a pair of Siebold's scissors guided by two fingers of the left hand.
- 7. In primiparæ, where the presenting part still remains high, in spite of cervical incisions, one or two deep vagino-perineal incisions may be made, which dilate the lower third as well as the orifice of the vagina. The resistance of the soft parts is thereby overcome and the high forceps operation or extraction by the foot facilitated and the prognosis for mother and child improved. Such incisions are sometimes useful in kyphotic or funnel-shaped pelves. They are best made with a scalpel, when the vaginal outlet is widely stretched and the head arrested. They should be 4 cm. long and 2-3 cm. deep, and should be closed with three stitches after the conclusion of labor.

The Induction of Premature Labor.—(Centralblatt f. Gyn., 26 Juli, 1890.)—Allfeld gives the results of 118 cases operated upon by himself and his assistants between the years 1871 and 1890 at Leipzig, Giessen and Marburg. Contraction of the pelvis was the chief indication for the operation (111 out 118 cases). The commonest forms of contraction were-

Rachitic pelvis (with slight or no general contraction). 2	4
Simple flat pelvis 1	
Anchylosed obliquely contracted pelvis	4
Double dislocation	2
Funnel pelvis	2
Osteomalacie polvis	
Spondylolisthetic pelvis	
Normal (i.e., relatively small)	
Undetermined	

The conjugata vera was on the average 7.97 cm. (3.14 inches); in 10 cases it was under 7 cm. (2.75 inches). Altogether 121 children were born (3 times twins).

Born alive10	02
" dead	19
Died during first day	18
" before the 12th day	9

75 living children (62 p.c.) were discharged from hospital along with their mothers.

In the 99 cases of contracted polvis 101 children were born (twice twins). Of these were

In cases where the conjugata vera was under 7 cm. (2\frac{n}{2} in.), of 10 children none lived.

Where the conjugata vera was 7-8.5 cm. (2.75-3.35 in.), of 57 children 38 (66.6 p.c.) lived.

Where the conjugata vera was 8.5-9.75 cm. (3.35-3.84 in.), of 25 children 21 (84 p.c.) lived.

Only one mother died from the direct effects of the operation; in her case death was attributable to bruising of the parts, from the passage of a large head through a deformed pelvis. During the pucture 75 recovered without rise of temperature (68.8 per cent\_...hich is the usual percentage in ordinary cases); 87 were discharged well on the twelfth day (80 per cent\_).

The method which Ahlfeld considers most effectual is Krause's—that is the introduction of a flexible bougie into the uterine cavity without rupturing the membranes. The membranes should be ruptured to induce labor, only in cases where the mother's life is at stake, or where some dangerous symptom must be met by speedy evacuation of the liquor amnii; the child's chances are thereby minimised. The conclusions drawn from this interesting and valuable paper are as follows;

- 1. The induction of premature labor maintains its place as a means of saving the child's life in cases of contracted pelvis, notwithstanding the improvement in the results of the Cæsarian section. If in 111 cases only one mother died from the direct results of the operation, 80 per cent. made a perfectly normal recovery, and the rest had a more protracted puerperium without any serious symptoms, the result of the operation must be considered good for the mother. If, further, out of 101 children born after the induction of labor in cases of contracted pelvis 60.39 per cent. left the hospital well along with their mothers, the result of the operation is also good for the children. In contrast to these results he reports that in 6 cases of Cæsarian section in contracted pelvis done in Marburg, 2 mothers and 1 child perished.
- 2. Krause's method may be used in private practice, but the chances of a favorable issue are greater in a hospital.
- 3. Premature labor should be induced as late as possible, in the interests of the child.
- 4. The lowest limit of pelvic contraction in which the operation may be performed may be placed at conj. vera 7 cm.  $(2\frac{3}{4} \text{ in.})$ .
- 5. The artificially induced labor should resemble normal labor as far as possible.

Dührssen's article is very timely. The brilliant results of the improved Cæsarian section have tended somewhat to divert attention from less showy but really more conservative procedures. Cæsarian section undoubtedly has its place, but that place is far more limited than some of its advocates claim. Duhrssen's results show what can be done when systematic and careful examination of patients is made early enough to diagnose pelvic contraction and in suitable cases permit the induction of premature labor. The necessity of medical men perfecting themselves in the technique of external palpation and pelvimetry becomes daily more evident.

Difficulties in Inducing Labor. (Annales de Gynécologie, Juillet, 1890.)—Professor Pajot relates the following case. In the beginning of the year a woman aged 25, of small stature, but otherwise well formed, was brought to his clinic. She had

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been confined three years previously,-the child was so large that it died during delivery, and so much force had to be employed with the forceps that the pubic bones were separated a finger's-breadth at the symphisis, compelling her to remain eighteen months in bed tightly bandaged before she was well enough to get up. She was again pregnant between three and four months, and wished to bear a living child and at the same time avoid the recurrence of the difficulties experienced at her first confinement. As the conjugata vera measured about 9 cm. (3! inches), it was determined to induce labor between the seventh and eighth month. On 7th June a bougie was passed into the uterus and allowed to remain for twenty-four hours: uterine action not having begun, it was removed, disinfected, and reintroduced. This failing, a sponge was passed into the uterine eavity and left there till the morning of the 11th, but without effect. The sponge, swollen to the size of a hen's egg, was withdrawn and two similar ones introduced; every three hours douches were administered. Pains set in, lasted for three hours and then disappeared. On the 12th the sponges were withdrawn, the uterus and vagina douched out, and a rubber dilator introduced, which when distended with warm water measured 6 cm. (2.36 in.) in diameter. Douches were again given every three hours. The rubber bag remained in situ till the morning of the 14th without exciting uterine action, and it seemed as if puncture of the membranes would have to be resorted to. One more attempt was made, and this time successfully. The rubber bag was withdrawn and two others of the same size introduced and filled, and douches given every two hours. During the night pains set in and a living child was born spontaneously on the morning of the 15th. It took 84 days to induce labor; in his enormous experience of 48 years Prof. Pajot had never met with a case in which the induction of labor was so difficult or tedious. remarks that this case is one more fact to be added to the article PATIENCE in Obstetrics.

Fatal Hemorrhage from Laceration of the Vulva. (British Medical Journal.)—Dr. Drzmalik reported in the Wiener Klin. Wochenschrift an unusual case, which is of considerable obstetric and medico-legal interest. A woman, aged 24, in the eighth

month of her first pregnancy, was seized with sudden faintness in the hall of her house, leaned against the wall for support, but gradually slipped to the floor with thighs extended. She was picked up unconscious and bleeding, and soon expired. No trace of violence was found, but immediately above the meatus urinarius an angular laceration was discovered, the meatus lying close to the apex of the angle. The wound was the source of the fatal hemorrhage, and was caused by the sudden and extreme abduction of the thighs.

Antipyrin in Obstetrics. (Medical News, July 26th, 1890.) -In an editorial upon this subject the researches of M. Misrachi, published in the Revue Générale de Clinique et de Thérapeutique, are commented upon. M. Misrachi gave antipyrin to thirty women during labour, and found that it gave relief in nine cases. In five of these, lumbar pains were intense; in one there was tetanic contraction of the uterus; in two, excessive rigidity of the cervix; and in one, great nervous excitability. In four cases the liquor amnii had come away early, and in all the os was but slightly dilated and there had been severe pain, lasting six, seven, twelve, eighteen and seventy-two hours. these nine cases, antipyrin relieved pain, calmed nervous excitability, and relaxed tetanic uterine contraction and rigidity of the cervix. In normal cases the drug gave no relief. Like opium and chloral, it is useless in the second stage of labor when pain is due to compression and great distention of the genital canal; then ether and chloroform are most efficient. It is evident. therefore, that antipyrin is useless in normal labor, but is of value in certain painful complications of the first stage of labor. is indicated in tedious labor, when there is an exaggerated nervous susceptibility to pain which reflexly interferes with the efficiency of the uterine contractions, when the liquor amnii has come away prematurely, or when there is rigidity of the cervix or spasmodic contractions of the os or body of the uterus. is, moreover, of value in the treatment of false pains, threatened abortion and after-pains. M. Misrachi mentions a case where slight hemorrhage and considerable pain occurred at the time of the usual menstrual flow in which opium and prolonged rest gave no relief, but antipyrin acted well. In cases of threatened abor-

tion, the pains promptly disappeared and gestation was not interrupted. In two cases of placenta prævia it did good service: in one, bleeding was controlled at the fourth, sixth and seventh month; in the other there was a slight hemorrhage at the sixth month and a profuse one at the end of the eighth month, with strong uterine action and dilatation of the os to the size of a silver dollar, the placenta being centrally attached. Fifteen grains of antipyrin every half hour for three doses arrested the hemorrhage and labor terminated safely in six hours. In the treatment of after-pains it succeeds in 95 per cent. of the cases, and, as M. Chauppe first pointed out, is specially useful when the after-pains are caused by ergot. M. Misrachi finds thirty grains sufficient in most cases, though forty-five grains may be administered. It is best given in divided doses every hour or half hour according to the urgency of the case. When there is a tendency to vomit, it is best given by enema (antipyrin grs. xxx, tinct. opii m, v, aq. 3 iv); two or three such may be administered. Although he has used the drug in hundreds of cases he has never noted any ill effects, and thinks that cases of socalled antipyrin poisoning are due to personal idiosyncrasy. Antipyrin is not a specific for pain in obstetrical practice, but, like all other drugs, must be used with judgment and in suitable cases.

The Etiology of Septic Peritonitis. (Annales de Gynécologie, Janvier 1890.)—Dr. Bumm of Wurzbourg contributes an article on this subject, maintaining that septic peritonitis appears in the following forms:—

- 1—Aseptic peritonitis. This is the benign form, produced by mechanical, chemical and thermic irritation without the active participation of bacteria. It is characterized by a tendency to fibrinous exudations and adhesions between serous folds. It usually remains circumscribed, though it may become general if the irritation involves the whole peritoneum.
- 2—Septic peritonitis.—(a) Peritonitis with streptococci—habitually determined by puerperal infection, but may also depend upon the opening of septic channels in the peritoneum, or infection during operations, etc. (b) Putrid peritonitis—eccurs after laparotomy or the perforation of the hollow organs of the abdomen.

3—Specific inflammation of the peritoneum. Tuberculous peritonitis is the most important variety. Is there a gonorrheal peritonitis? It is doubtful—gonorrheal microbes have pathogenic action only on mucous membranes and die in serous cavities. When cystic tubes burst and gonorrheal matter escapes into the peritoneal cavity, it acts generally as an aseptic foreign body and becomes encysted. If the pus from the ruptured tube contains pyogenic as well as gonorrheal microbes, a septic peritonitis will probably be lighted up.

Fever in Childbed. (Amer. Jour. of Obstetries, Aug. 1890.) At the meetings of the London Obstetrical Society on June 4th and July 2nd, 1890, Dr. Robt. Boxall gave a resumé of the practice of the General Lying-in Hospital from July 1882 to June 1889 inclusive, with elaborate charts and tables dealing with the 2,762 cases delivered during that period of time. He claims as proven—

- 1—That the proportion of cases affected with fever declined rapidly, then became steady, and has since diminished slightly.
- 2—That this decline is mainly attributable to the decrease and temporary abolition of cases of septicæmia and pelvic inflammation.
- 3—That in febrile cases, the duration as well as the height of the fever have diminished.
- 4—That these changes are identical in point of time with certain changes effected in the hospital service.

An important point proved by Dr. Boxall is, that the decline in the general fever-rate during the past five years has been mainly due to the diminution of septicæmia, and whenever a temporary rise in the general fever rate has taken place, careful investigation has demonstrated an increase in the septic element. This has been in the main the experience of other institutions, and it is satisfactory to find it borne out by Dr. Boxall's careful researches. Another interesting point is that the fever and septic rate declined when sublimate was substituted for Condy and carbolic acid, rose when salufer replaced the sublimate, and declined again when he returned to the routine use of sublimate. It was also evident that strong solutions are more efficacious for douching purposes than weak ones, and that therefore antiseptic

are preferable to merely aseptic douches. Routine antiseptic or aseptic douching during the puerperal period is condemned. With regard to the danger of mercurial poisoning from the absorption of the stronger douche-solutions, Dr. Boxall believes that there is less danger in mercurialism than in sepsis, and that the routine use of strong antiseptic douches of corrosive sublimate must continue unless or until the manifold sources of septic infection can be traced and dealt with outside the body. Intrauterine douching is used only when the hand or some instrument has been passed into the uterus, or where the fœtus was macerated or decomposed, or where there was retention of clots or bits of membrane. In such cases it should be used immediately after the conclusion of labor; it will then be rarely necessary to use an intra-uterine douche during the puerperium. When the discharges become foul the genital tract should be carefully examined, beginning at the vulva, and cleansed of all decomposing matters; such practice is preferable to blind indiscriminate douching. For the hands the solution of sublimate should be 1×1000; for the douche before and immediately after labor it should be 1×2000. He does not consider iodoform suppositories of any use after intra-uterine douching, nor does he consider them sufficient substitutes for irrigation. He finds absorbent cotton better for vulvar pads than wood-wool. He concludes that the gradual improvement in the statistics of the hospital has resulted partly from attention to points of general hygiene and partly from practice in dealing with the antiseptics used-that a further improvement was effected by a substitution of sublimate for other disinfectants, but that a retrogression occurred when the strength of the sublimate solution was reduced or when it was replaced by salufer.

Diphtheritic Puerperal Infection. (Annales de Gynécologie, Juillet 1890.)—Péraire reports the case of a woman, II-para, aged 28, confined at full-term of a living child. On the second day came a rigor and signs of septic infection; the case grew rapidly worse, the uterus was curetted, but finally death took place on the 16th day. False membranes containing streptococci were found post-mortem in the vulva, vagina and uterus. The author then asks how, in the present state of our knowledge, we

should proceed to prevent the occurrence of this malignant form of puerperal septicæmia. The routine he prescribes is so minute and for ordinary cases of confinement so irrational and impossible, that it is worth while to transcribe it, if only to show to what absurd lengths even able men will sometimes ride their hobbies. He divides the precautionary measures into three classes—(1) precautions during pregnancy, (2) precautions before, during and after confinement, (3) measures to be taken when infection occurs.

- 1—Precautions during pregnancy. From the beginning of gestation every pregnant woman should use a warm vaginal injection of weak biniodide solution twice a day, the vulva should then be washed with soap and warm water and a tampon of absorbent, borated or salolised cotton placed over it. The vaginal douche nozzle should be kept in a glass jar filled with borated water and hermetically scaled. She should take a general bath at least twice a week, provided the water is not too warm and the bath does not last longer than twenty minutes. These precautions will prevent the woman from taking chills or having a rise of temperature, and the child from contracting purulent ophthalmia.
- 2—The accoucheur must thoroughly disinfect his hands and arms in the ordinary way. Before making a vaginal examination, an antiseptic douche must be given, and a complete toilet of the genital canal, external parts and perincum made with pledgets of absorbent cotton soaked in biniodide of mercury solution 1×2000. The examining finger, still wet with the disinfectant fluid, should be anointed with bichloride or carbolic acid pomade. After delivery, an antiseptic vaginal douche will be sufficient if no operative interference has been necessary. During the puerperium a very hot vaginal douche must be given twice daily and a pad of iodoform or salol cotton kept constantly applied over the vulva.
- 3—After confinement the patient is exposed to the various infective accidents which complicate wounds, such as traumatic fever, acute septicæmia, chronic septicæmia, and purulent infection. If symptoms of infection occur, the vaginal douching must be more frequent, intra-uterine injections must be given,

and the patient washed morning and night with borated water. Internally, quinine and tonics are indicated, while the intestine is disinfected by means of charcoal and naphthol  $\beta$  or charcoal and salol. If improvement does not take place in twenty-four hours, the uterus must be curetted.

Slow Desiccation and fall of the Cord. (Annales de Gynécologie.)—Loviot reported to the Obstetrical Society of Paris the case of an infant born three weeks before term, where the cord did not separate till the fifteenth day. It had been treated with borated cotton and was quite dry.

A Case of Rupture of the Uterus successfully treated with Iodoform Gauze Tampon. (Der Frauenarzt, Juli 1890.)—Dr. Herzfeld, one of Karl Braun's assistants in Vienna, reports a case which tends to confirm the views expressed by Leopold and Piskacek, that abdominal section should be performed in cases of runtured uterus only under very special circumstances, and that the iodoform gauze tampon is generally safer and more effectual. The patient was a V-para, from whom the liquor amnii had come away three days previously. The child lay transversely; turning and decapitation had been tried by the attendant, but without sucess. When she entered the klinik she was much collapsed, the left shoulder was jammed in the pelvic brim, and the left hand protruded from the vulva. There was a rupture on the left side of the cervix, 3 cm, under the internal os, through which the whole hand could be passed into a cavity filled with clots. Decapitation was performed with Braun's hook and the child delivered; a discolored placenta soon came away, followed by a quantity of dark blood and clots. Strips of iodoform gauze were packed into the uterus and the cavity of the rupture and a firm compression band fitted on externally. On the evening of the sixth day the temperature was 100.2°, otherwise everything was normal. The tampon was then removed; there were several ulcerated patches in the vagina and vulva, which were brushed with tincture of iodine. The vagina was syringed with thymol-solution and the subsequent course of the puerperium was normal. The uterus involuted normally and there was no sign of exudation.

Rupture of the Uterus; Passage of the Fætus into the Peritoneal Cavity; Recovery. (Gazette des Hopitaux.)—M. Gueniot reports a case treated in the Paris Maternitie, where complete rupture of the uterus took place, the fectus passed almost completely into the abdominal cavity, but was readily delivered per vaginam. During the manipulations necessary for extraction, the round ligament and the lower border of the liver were plainly felt. After extraction, hypodermics of other were administered, heat applied to the general surface, and compression of the uterus maintained from above downward in order to approximate the divided parts; afterwards antiseptic vaginal injections were given, and bladders of ice applied to the abdomen. For some time the patient suffered pain at the site of the rent, the temperature went up a little, and peritonitis was threatened several times, but she eventually made a good recovery. Gueniot remarks that, provided strict antisensis is observed, such grave injuries may be cured without operative interference even in the wards of such an old-fashioned and in many respects unsuitable building as that of La Maternité. From this case also we learn that abdominal section is neither the only nor the first resource in rupture of the uterus.

Trea ment of Extra uterine Pregnancy. (Doutsche Med. Wochenschrift, No. 8-10, 1890.) - Olshausen recommends immediate abdominal section in the first three months if the sac has not ruptured; but if rupture has taken place, the operation is warrantable only when the symptoms are urgent and antiseptic precautions can be ensured. In the second half of pregnancy, if the child is living, he advises immediate operation without waiting for the viability of the child. Towards the close of pregnancy he does not wait for the death of the child, but operates at once; he considers waiting for the death of the child more dangerous even than operating when the child is alive. If the child dies during the latter half of pregnancy, he advises waiting for 8-10 weeks before operating, till the placental circulation has ceased. In conclusion he reports 8 cases of operation where the fectus was at or near full term. In 2 cases the child was living, and one of these was saved. In all the others the fœtus had been dead for some time. All the mothers recovered. The ovisac remained behind in 3 cases, and was sewn to the abdominal wall and packed with iodoform gauze. In 4 cases the whole placenta and ovisac were extirpated. In 2 cases the placenta was left behind; in one case it was removed artificially on the 11th day, and in the other it came away spontaneously on the 34th day. When the child lay free in the abdominal cavity, the placenta was removed along with the child. Olshausen recommends removal of the whole ovisac if possible, otherwise stitching to the abdominal wall either before or after it is emptied. He condemns elytrotomy and drainage per vaginam.

Retention of Placenta twenty-five days Post-partum without Putrefaction. (Der Frauenarzt, Juli 1890.) - Dr. Mensinga of Flensburg reports the following case. On 31st March his patient expelled a four-months focus with very little loss of blood; the placenta did not come away. The following day the patient felt well, the os was quite closed, and no bleeding. Warm creolin douches were given twice daily for four days, and then the patient insisted upon getting up and looking after her household duties. A sero-sanguinolent discharge began, and she suffered somewhat from backache; but sleep, appetite and digestion continued good. On the 25th April, while standing in the kitchen, a sudden hemorrhage came on, and she was lifted into bed blanched and unconscious. The little finger could be passed through the os. A Sims' speculum was introduced, the anterior lip steadied with forceps, and a strip of iodoform gauze packed into the uterine cavity and another into the vagina. No more bleeding occurred, and the next day the woman was placed in the knee-elbow position and the tampons removed. The placents lay over the os and was easily extracted; it had the shape of a duck's egg and was quite free from smell. Another tampon was put in for twenty-four hours and then daily creolin injections given. The patient recovered without the slightest ill consequences. Dr. Mensinga congratulates himself upon not having had the furor operativus, or he might have been tempted to dilate that closely contracted os on April 1st and remove the placenta artificially; he thinks the result for the patient might have been worse. In the opinion of most careful obstetricians,

on this side of the Atlantic at least, the worthy doctor took upon himself a serious responsibility in allowing a woman with a retained placenta to get up and go about her household work. She might at any moment have had a fatal hemorrhage or developed symptoms of septicæmia. Nature is to be congratulated in this case, not the doctor. It cannot be too strictly laid down as a rule of practice, that while a placenta is retained in utero (in whole or in part), the patient is exposed to the risks of hemorrhage and septicæmia; she should therefore be confined to bed and means taken to get the retained mass away as soon as possible. In such cases delay is dangerous.

The Use of Spirits and Malted Drinks in Nursing Women. -An interesting discussion upon this subject took place recently in the Pædiatric section of the New York Academy of Medicine. The subject was introduced by Dr. A. Jacobi in an able paper. He said that a proper understanding of the subject necessitates a consideration of the nature of the mammary secretion and the circumstances under which it may become mixed with drugs or other matters found in the circulation. Foreign matters have been found in the milk of nursing women, but the conclusions drawn therefrom by different observers have been conflicting and misleading. A knowledge of the physiology of lactation generally enables such discrepancies to be reconciled. The solids of the milk consist of transformed cells of the mammary glands, and contain a considerable quantity of potassium and phosphate of lime, a very little chloride of sodium with casein, milk-sugar and more fat than is found in the blood. Incomplete changes in the mammary epithelium produce colostrum, not milk; and the quality of the milk depends far more upon the condition of the gland than upon any article of diet. General constitutional conditions, emotion, and the period of lactation strongly influence the character and quality of the milk; if much deteriorated, the milk may become mixed with transuded blood-serum. This transudation milk may thus contain medicinal or other substances from the maternal circulation, and may convey these matters to the infant, causing serious or even fatal disturbances. Mental emotions may in a similar way produce a profound effect upon the child. the early days of lactation, while colostrum is being secreted, opium more readily passes over to the child than it would do later on, and thus a dose of opium given to the mother might produce an injurious effect upon the child early or late in lactation which it would not do when the milk is free and is a normal secretion. Applying these principles to the present subject, it is evident that alcohol may be taken by a mother without in any way affecting the child, provided the mammary secretion is nor-real; but if the milk is deteriorated, injurious effects may result. The literature of the subject is scanty. In 1853 Becquerel claimed as the result of his observations that when nurses took alcohol freely the children were sleepy, restless, and often took convulsions. Stumpf asserted that alcohol had no effect upon the milk, and that salicylate of sodium is the only drug which increases its quantity. Jacobi's experience goes to show that the salicylates do increase the quantity of milk, but that alcohol does not. Alcohol acts in the same way as the carbo-hydrates, and the effect sought to be obtained by giving alcohol may be more easily and safely secured by giving carbo-hydrates in some other form, such as milk and farinaceous foods. A woman in ordinary health requires about 90 grammes of albumin daily; a nursing woman requires about 150 grammes; the additional quantity is to be supplied by a liberal diet of meat and milk. Jacobi would forbid the use of alcohol by nursing women, unless there is definite indication for its use as a medicine

Dr. Partridge thought that the quantity of mother's milk could be increased by the use of malted drinks, partly because of the larger amount of fluid taken and partly by the stimulation of maternal nutrition. He does not approve, however, of this "high-pressure nursing," as it is apt to cause functional disorders of the heart and pelvic organs, and is quite unnecessary in these days of improved infant foods. He would not take away malted drinks from one accustomed to their use. If a woman believes firmly that malt liquor or anything else is going to increase her milk, it will probably have the desired effect.

Dr. Siebert found that among the poorer classes who drink much stale beer, that unpleasant effects upon the children are common. This he attributes to bacteria, and he always forbids

beer to the mother when the child is suffering from gastro-intestinal disorders.

Dr. Grandin has always been in the habit of allowing malt liquor to nursing women who seem in need of a stimulant, and has never been able to trace any ill-effects to the child from such a practice. He thought the quality and quantity of the milk were both improved.

Dr. Jacobi, in closing the discussion, said that it seemed pretty well agreed that liquors are unnecessary and for the most part injurious to nursing women, although in some cases they may be helpful in aiding the digestion of the large quantity of carbohydrates required during the period of lactation.

The venerable superstition that nursing women need to drink ale or porter to improve their milk has received its death-blow at Dr. Jacobi's hands; and it is to be hoped that clearer ideas respecting the physiology of lactation will lead to more rational methods in the dieting and physicking of nursing women.

Hydramnion in Twin Pregnancy. (Brit. Med. Journal.)-Dr. Kruse of Greifswald reports a case in the Deutsche Med. Wochenschrift, where hydramnion occurred in a single-ovum twin pregnancy. The patient was 41 years old and had borne seven children. After a fall, the abdomen suddenly increased in size and dyspnœa set in. On admission to hospital the diagnosis was twin pregnancy at the sixth month with hydramnion of one Krause's method having failed to induce labor, the membranes were ruptured; seven quarts of liquor amnii came away and the twins were soon expelled. None of the conditions were found which are said to cause hydramnion in single-ovum twin pregnancies. The placental and funic circulation was perfect. One feetus was larger than the other, but there was no anæmia of the one with corresponding plethora of the other. The bladder of the bigger fectus was much distended with urine, the ureters tortuous, and the renal pelves dilated. This was caused by mechanical obstruction to the escape of urine by pressure of the amniotic fluid. There was no obstruction in the genito-urinary tract. Hydramnion was therefore not caused by polyuria in the fœtus. The relatively small size of the other fœtus was due to

the small surface of placenta from which it derived its nourishment. The cause of the hydramnion was not determined.

Hernia of the Gravid Uterus. (Archiv für Gyn., Bd. xxxvii, IIft. 2.)—Dr. Sparling, one of Professor Leopold's assistants in Dresden, gives the notes of a rare and interesting case. The patient, et. 30, III-para, of slight build, entered the klinik on April 2nd, 1889, stating that the liquor amnii had come away on 30th March, and that pains had begun the following day. In the middle line, below the umbilicus, was a hernial protrusion of the pregnant uterus, which fell forward and completely covered the genitals when the patient stood erect. During the uterine contractions, the round ligaments and fallopian tubes could be distinctly seen through the thin covering of the abdominal integument. The diagnosis was a living child about the beginning of the seventh month presenting in the first position of the vertex. Labor was tedious, and terminated early in the morning of the 6th April. The child was living, but very weak, and died twenty The hernia took place through the cicatrix hours after birth. of a Cæsarian operation performed six years previously. ing had failed to effect delivery, and during the manipulations the child's head had been torn from the body; the section operation was then performed. After a ten weeks' puerperium the patient recovered. The pelvis was contracted, the conj. vera being 6.75 cm. (2.66 in.).

Hemorrhage in an Infant caused by Ergot taken by the Mother. (Amer. Jour. of Obstetrics, Aug. 18(0.)—1)r. B. McE. Emmet narrated a case before the New York Obstetrical Society in which ergot was given for several days to a puerperal woman for recurrent hemorrhages, when it was noticed that the child hiccoughed and showed signs of dislike when put to the breast. On the third day spots of blood were noticed on its dress and about its lips and face, while its motions were black and tarry. These symptoms ceased when the ergot was stopped. The blood was not vomited, and examination failed to discover any bleeding point; the blood seemed rather to well up into the mouth. There was no blood in the urine.

The Use of Forceps in Breech Cases. (Archiv für Gyn., Bd. xxxvii, IIft. 2.)—Dr. Fürst of Graz strongly recommends

the use of forceps in delayed breech cases, in preference to the fillet or blunt hook. The forceps should have a large cephalic curve, and the points of the blades should come close together. Traction should be made only during the pains, and then the force of uterine contraction and the pressure of the soft parts will tend to prevent slipping of the blades. The instrument is used therefore simply to supplement an inefficient driving force.

Graves' Disease in Pregnancy. (Brit. Med. Journal)-Dr. Häberlin of Zurich described the following interesting case in the Centralblatt für Gynakologie. The patient, aged 36, VII-para, became pregnant in August 1889. Strange nervous symptoms developed, such as emaciation, shakiness of the hands, palpitation and constriction about the throat. She spent the summer at the seaside and these symptoms almost disappeared, but exophthalmos, swelling of the thyroid and vomiting took their place. At the eighth month the fœtus died, a hemorrhage occurred from partial detachment of the placenta, and labor terminated March 9th, 1890. After delivery the exophthalmos rapidly declined and the patient was able to close her eyelids completely during sleep on 14th March. By April 15th the signs of goitre had almost disappeared. Conception was no doubt the cause of the Graves' disease, and it in turn caused the death of the fœtus. This case is very similar to one described by Benicke, where detachment of the placenta normally attached to the uterus occurred in the thirty-sixth week of pregnancy. In the case which was under treatment in the Montreal Maternity, the heart affection was more marked and eventually caused the patient's death. The fœtus died in utero, but there was no detachment of the placenta.

## QUARTERLY RETROSPECT OF SURGERY.

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#### FLAT-FOOT AND ITS TREATMENT.

The proper method of treating flat-foot is still a vexed question. Some surgeons always treat it by means of mechanical appliances, whilst others say that quite as much good can be accomplished by means of massage, exercises, and avoidance of certain pernicious habits, such as walking with the toes out, etc. the past few years the tendency has been to operative measures for the cure of all deformities; hence a school has arisen where flat-foot is treated by excision of bone, osteotomy, incision of soft parts, etc. Many report a series of cases treated by operative measures with good results. No doubt the cases of flat-foot that come under the notice of hospital surgeons are those of the more severe kind, where there is actual displacement or dislocation of the bones and hence most serious deformity, and this deformity is quite irreducible except by some operative procedure. In cases seen in ordinary out-door or dispensary practice, the patient comes complaining of pain on standing, and if there is any deformity whilst in the erect position, it disappears when the foot is lifted from the ground. In these cases operative measures could not be advised, but rather some form of mechanical appliance or the building up of the inner side of the boot, so as to throw the foot out after the plan of Thomas. No doubt in many cases the arch of the foot is ill-formed and low. This is a congenital defect which predisposes to those severer forms which give rise to symptoms.

There are several theories regarding the cause of flat-foot; some hold that under increased weight, especially during the time of growth, the strain falls upon the os calcis at a point internal to its base, and thus tends to roll it over to the inside and favors a displacement of the astragalus downwards and inwards. Normal muscles and ligaments always tend to prevent this, and at first the displacement is only when the foot rests on the ground and is therefore temporary; at last the muscles get tired out,

the ligaments become stretched, and the temporary displacement becomes a permanent one. Humphry of Cambridge is a strong supporter of this theory, laying the blame chiefly on the calcaneoscaphoid ligament, which ordinarily supports the astragalus.

Von Meyer (Centralblutt f. Chirurgie, No. 18, p. 284,1883), who made a number of examinations on the dead subject, came to the conclusion that the inferior calcaneo-scaphoid ligament is not stretched, and the arch of the foot not flattened. He attributes the deformity to an inward displacement of the arch and with it of the whole foot, due to an exaggerated rotation of the astragalus. He attributes these conditions to an increase of weight, faulty attitudes in standing and walking, turning out of the toes and the wearing of improper shoes.

In most cases of flat-foot there is a congenital predisposition. I have made frozen sections of flat-foot which plainly show this. In many cases of well-marked flat-foot there is no stretching of the ligaments at all, the bones being as closely applied as possible and the inferior calcaneo-scaphoid ligament being perfectly normal, but on examining a longitudinal section of the foot it is seen that the os calcis is not so upright as it should be—that is, the posterior pillar of the arch is more oblique. This throws the astragalus forwards and inwards and the anterior portion downwards. If this condition be exaggerated, a well-marked form of flat-foot is produced. This flatness of the arch of the foot is merely a reversion to a lower and more primitive type, and is common to all the primates and plantigrades.

The Rational Treatment of Flatfoot.—Dr. R. Whitman (N.Y. Med. Jour., May 17th, 1890) says in spite of all that has been written on this subject, less is known of flatfoot, its diagnosis, causes, results and proper treatment than of any affection of corresponding frequency and importance in surgery. Dr. Whitman looks upon clubfoot as an acquired partial dislocation of the bones of the foot and nothing else; muscular spasm, lax ligaments, inflammation, etc, follow, but do not cause flatfoot. The dislocation is the result of an over-strain or weight, aggravated, it may be, by injury or disease. Mechanical disadvantages in standing or walking which predispose are (1)

exaggerated turning out of toes and (2) improper shoes. Treatment is (1) to replace the dislocation, (2) to hold the foot in proper position, (3) to strengthen the supporting muscles, and (4) to avoid the original exciting cause by cultivating a proper walk. After speaking of the diagnosis, the author goes on to consider treatment. Cases may be divided roughly into two classes. Where the foot can be easily replaced in normal position;
 where it can not. He speaks of Thomas' plan of building up the inner side of the shoe as a good one, particularly in weak ankle cases, as it tends to throw the weight of the body on the outer side of the foot. Gymnastic exercises and proper shoes may suffice in some cases, but in the majority something more is needed, and his plan is as follows. First, the dislocation should be reduced by manipulation if possible; if not, under other. When in proper position the foot should be retained in that way by plaster-of-Paris bandages until the spasm and congestion have disappeared, and then the foot must be retained in this position. A plaster cast should first be taken of the replaced foot, and from this an iron pattern is made, and on this a brace of thin, tempered, unyielding steel is moulded. This brace accurately fits the foot and can be placed in the boot, and tends always not only to support the foot, but to throw the weight on the outer side.

I had the pleasure a short time ago of seeing this brace at the New York Hospital for Ruptured and Crippled, and was much struck with its simplicity and usefulness. Dr. Whitman insists on the patients walking properly, not turning out their toes, but keeping them directly in front of the body and thus "walking over them," thus necessitating muscular flexion of the foot, which is the best possible exercise. Flatfoot is a troublesome affection to treat, and in children leads to other serious results, as knock knee, etc.

Dr. T. S. Ellis (Edinburgh Medical Journal, January, 1890) describes a rational method of treating flat-foot without the use of mechanical appliances. The chief principles are: (1) To make the patient vigorously spring on tip-toc, both as a special exercise and in walking; this raises the arch of the foot and relieves strain on ligaments. (2) Avoidance of prolonged stand-

ing, low-heels, flat soles, not too thick, and no springs or supports to the arch, giving free play to inward movement of great toe. (3) Never turning out toes in walking and avoidance of fatigue.

Removal of an Ingrowing Toe-nail for Relief of Flat-foot .-Dr. V. P. Gibney, in an article entitled A Contribution to the Study of Flat-foot, states that he is indebted to his friend Dr. R. Abbé of New York for the suggestion which he carried out in the following case. A gentleman consulted him who had been suffering for two and a half years with an annoying pain in the sole of his foot, which pain he thought had followed an attack of subacute rheumatism. A point of tenderness was found over the scaphoid, near its junction with the first cunciform bone. The arch of the foot could be easily restored by manipulation, and some relief was felt. He had his shoe built up after the method of Thomas of Liverpool, and used various kinds of splints, without permanent benefit One evening he came in great distress complaining of a painful ingrowing toe-nail on the same The toe was found to be much inflamed. He had suffered from this ingrowing toe-nail for two years. The toe-nail and the painful granulations were removed, and the wound soon healed. Six months after he reported that he had neither an ache or pain since the operation—the painful flat foot was cured. Dr. Gibney adds two cases furnished him by Dr. Abbe, where the intractable pain of flat-foot was permanently relieved by operation for relief of ingrowing toe-nail.

Dr. Willy Meyer, in an interesting article on The Treatment of Flat-foot by Supra-malleolar Osteotomy, says that non-operative measures should be tried in all cases of flat-foot where the deformity is still reducible by manipulation; but in more advanced cases, where the deformity has become rigid, where the astragalus has slipped forward, downward and inward from the os calcis, and the scaphoid also has been displaced downward, where the shape of the bone has been permanently changed, non-operative treatment will take a long time to cure, and even the ultimate result will be doubtful; and for such cases he strongly advocates operative measures, and preferably osteotomy of the tibia and fibula just above the ankle joint. This operation was

introduced by Trendelenburg of Bonn at the meeting of the German Surgical Society at Berlin in April 1889, and he called it "supra-malleolar osteotomy." He had seen good results follow this operation in correcting traumatic talipes valgus, a position the result of a neglected and unreduced Potts' fracture. and so it occurred to him to try the same means for idiopathic flat-foot. The cause of the pain in flat-foot is due to the displacement of the line of gravity by the alteration of the longitudinal axis of the leg. The foot being in this abnormal position the tarsal ligaments are stretched and the foot everted, the internal malleolus markedly prominent. Walking and standing tend to increase this deformity and the pain also. Now if the tibia and fibula are cut across with a chisel immediately above the malleoli the deformity can be corrected and the foot so placed as to transmit the weight of the body through the tarsus in an oblique direction—that is through the cuboid instead of the scaphoid bone. Trendelenburg performed supra-malleolar osteotomy seven times in five patients between the ages of 16 and 40, and was astonished to see the remarkable result. was restored and the displacement of the leg and foot at once removed; the difficulty and pain in walking or standing had fully or nearly disappeared. At the same meeting, Hahn of Berlin stated that he also operated on flat-foot by osteotomy, but of the tibia only, and deemed it very important to cut the bone immediately above the malleolus. He had operated five times in three patients. One patient was cured, the second improved; in the third the operation rather aggravated the trouble. Hahn proposed to add Ogston's operation to osteotomy and reduction in extreme cases.

Dr. Meyer has operated on two male patients with the best results; one was aged 24, the other 20; both were exhibited to the New York Surgical Society in March, 1890. He followed the rules laid down by Trendelenburg (Archiv f. Klin. Chirurgie, Bd. xxxix., IIft. 4). An incision half an inch long is made down to the fibula, about two inches above the tip of the malleolus, the foot, placed on a sand-bag, being turned inwards by an assistant. The chisel is introduced at an angle of 90° and the bone cut across. The wound is covered with an antiseptic

sponge and then the leg is turned on its outer side and the same operation is performed on the tibia at the same distance above the malleolus. Macewen's large steel chisels are used. The bones, after chiselling, having been broken forcibly, the foot is turned inwards and fixed in that position by a plaster-of-Paris splint, which is continued up to the middle of the thigh. The knee-joint is flexed at an angle of 145° in order to relax the gastrocnemii. The foot should be put up in rather an over-corrected position. The first dressing in Dr. Meyer's cases was made on the thirty-fifth day; the wound was found healed and the bones firmly united. In one of these cases the foot was over-corrected, and Dr. Meyer advises that about the tenth or twelfth day the splint should be removed and the position of the foot re-examined, and if necessary, corrected. The patient is able to go about in five or six weeks.

In June last I performed a similar operation on the right leg of a boy aged 20, who suffered from flat-foot. The case was an extreme one, with dislocation of the astragalus and scaphoid which could not be reduced. The boy had been unable to continue his work owing to the condition of his feet. The left foot was the subject of valgus, but of a much less pronounced type so I only operated on the right. The operation I found to be a simple one, and although the arch was not completely restored on section of the bones, as has been stated, still it was much improved. The foot and leg were put up in plaster-of-Paris in the inverted position and left up for four weeks. When the splint was removed the bones were found firmly united and the wounds healed; but although the shape of the foot was improved, still there was some valgus remaining. This may have been partly due to not having sufficiently corrected the deformity, but I did not want to overdo it. However, the boy can now walk comfortably and without pain. He is quite satisfied with the result. He is employed as one of the hospital porters. I intend to continue this plan of treatment, which is, however, only suitable for severe cases and as a substitute for Ogston's operation.

Ogston of Aberdeen (Lancet, Jan. 26th, 1884) devised an operation for the cure of flat-foot based on the idea that flat-foot was caused by the relaxation of all the articulations of the foot,

especially that between the scaphoid and os calcis, which led to the alteration of the bones concerned in Chopart's joint. So the cartilaginous surfaces of the astragalo-scaphoid articulations were chiselled off, and after restoring the bones to their proper position they were kept in place with ivory pegs. Ogston has operated on some fifty cases with very encouraging results, patients being able to walk in three months.

Weinlechner of Vienna (Wiener Med. Blatter, 1888) excised the astragalus for the radical cure of flat-foot. Modifications of Ogston's operation have also been devised by Sir W. Stokes of Dublin (Annals of Surgery, Oct. 1885), Hare of Philadelphia (Lancet, Nov. 9, 1889), and others. Phelps of New York has also performed an operation "which consists of making an incision across the sole of the foot, and through this incision the muscles and fascia are hooked up, cut apart, shortened, and again stitched, the object of the operation being to shorten the girders which hold up the arch."—(Transactions of the American Orthopædic Association, vol. i, 1889.)

### SURGERY OF THE SPINE.

At a meeting of the New York Academy of Medicine, held May 15, 1890, Dr. Robert Abbé read a paper on Spinal Surgery with a Report of Eight Cases (N.Y. Med. Record, July 26th. 1890). In these cases the posterior laminæ were removed and the cord exposed. Three were cases of paraplegia from fracture, one early curetting of a vertebra for Potts' disease, two of tumors of the vertebral canal with paraplegia, and two of intradural section of some of the posterior roots of the brachial plexus for neuralgia. In the first case, a woman aged 27, there was fracture of the spine between the 11th and 12th dorsal vertebra, followed by paraplegia. The operation was undertaken eleven months afterwards, and the intradural adhesions were broken up and the dura sutured. A year afterwards there was no relief of the paralysis. The second case, a merchant aged 27, was also done for paraplegia due to fracture below the 11th dorsal, which had lasted 21 years. This patient died thirty hours after the operation. In the third case, a coachman aged 27, operation was performed two months after the accident for paraplegia

due to fracture of the 11th dorsal. The patient recovered, but remained unimproved. In all these cases the spinal column was cut down upon, the muscles cleared away on one side only and drawn outwards by retractors, and after cutting the ligaments, the arches of the vertebra concerned were cut through with strong cutting pliers and the space enlarged with rongeur forceps and lifted up but not separated from the muscles. After the termination of the operation the dura was sutured and the spines replaced and sutured with catgut to those above and The fourth case was one of Potts' disease in a glassworker aged 20, with sinuses over the crest of the ilium leading to the 12th dorsal spine. An incision was made along this vertebra and the transverse process found carious and removed; the body of the vertebra was found softened and diseased, and was curetted away until hard bone was reached. The sinuses were also scraped out. In six weeks the patient was sent from the hospital with only a slight discharge and with but one sinus. The fifth case was that of a patient, aged 22, suffering from extra-dural tubercular tumor of the spine. There was complete paraplegia. In May 1888 Dr. Abbé operated, removing the spines and arches of the 8th, 9th and 10th dorsal vertebra; outside the carious arch of the 9th was half an ounce of thick pus, but within, filling the canal, was a small quantity of inspissated pus and a large amount of dense neoplasm, evidently tubercular, and compressing the cord. This was scraped away, the wound stuffed with iodoform gauze, and a plaster jacket applied. In three months he walked with crutches; in eight he became robust and walked well. He remained in perfect health for two years, but latterly a mass has appeared over site of the old scar which has a very tubercular appearance. In the sixth case there was paraplegia caused by an extra dural sarcoma in a man aged The symptoms had lasted eight months when he operated. The arches of the 8th, 9th and 10th dorsal vertebræ were resected, the tumor reached and removed, but the patient died on the ninth day from symptoms referable to the stomach. No postmortem was allowed. The two last cases, seven and eight, were performed for intractable brachial neuralgia. In one case the norves were stretched, the arm amputated, and finally intradural division of the 6th, 7th and 8th cervical and 1st dorsal nerves was performed. For a time the pain was relieved, but it has since returned. In the other case of intractable neuralgia the posterior roots of the 6th, 7th and 8th cervical and 1st dorsal nerves were resected. The case was somewhat improved, and morphia was given up; subsequently the pain returned, but not so severely.

In the discussion which followed the reading of the paper, Dr. Wyeth gave the histories of two cases of fracture of the spine in which he had operated. In the first the fracture was situated at the 12th dorsal. At the seat of injury the cord was found to be somewhat flattened, and there was considerable inflammatory lymph binding the cord very firmly down to the dura mater. The patient had been paralyzed for two years, and there was complete recovery. In the second case the operation was performed seventeen days after the injury, and there was immediate improvement in sensation, but paralysis of motion still remained. Dr. Gerster reported a case of vertebral tuberculosis of long standing operated on for rapidly increasing paraplegia. laminæ of the 6th and 7th dorsal vertebræ were removed, and an extensive extra and sub-dural abscess evacuated. There was considerable caseation of the soft tissues and the transverse processes of the 5th, 6th, 7th and 8th dorsal vertebræ on the right, and the 5th, 6th and 7th on the left, were found carious and removed with the heads of the respective ribs; the bodies of the 6th and 7th dorsal vertebræ were gouged away. The operation was well borne, but no immediate improvement of the paralytic symptoms was observed until the following August (four months In December the patient was discharged with a small sinus on the dorsum and in good health. Dr. Morris reported a case of bullet wound of the spinal column successfully treated by excision of depressed bone. Dr. B. Sachs deprecated operations on the spine for the relief of neuralgia, and said no improvement whatever was to be expected from them.

At the congress of German Surgeons, held in Berlin in April 1890, Prof. Kraske of Freiburg read a paper on *Trephining the Spinal Column for Paralysis due to Potts' Disease*. He stated that he had four times performed the operation, and had come

to the following conclusions (La Semaine Médicale, April 29rd, 1890, and Centralblatt f. Chirurgie, No. 25, 1890): That it is not possible to remove in this way all the tuberculous disease, and that it is only possible to relieve the disease; the operation, like tracheotomy for croup, is simply palliative-it will not cure. The resection of the vertebral arches may lead to further deformity and produce a paralysis which was not there before. He says the operation is not without difficulties. He places the natient on one side and removes the vertebral arch of the same side, and after the hemorrhage has ceased he does the same on the other side. The spinal canal is laid open by cutting pliers, and after one arch has been cut the others, by placing one blade of the pliers in the canal, are easily cut through; he curettes the diseased tissues. He has never yet in these cases opened the dura mater, all the disease being extra meningeal in the four cases; and in all, the wound was stuffed with gauze and not sutured. The indications for the operation are when there is a primary focus of tuberculosis in the vertebral arch; in such cases a radical operation may be undertaken, but these cases are rare. When the body of the vertebra is diseased one can rarely operate successfully. He does not advise a too hasty resort to operation in cases of paralysis from Potts' disease, and he only interfered when there was a paralysis of the bladder. All other methods of treatment should be tried before resorting to operation In the discussion which followed, Israel and Bergmann of Berlin spoke rather disparagingly of operations in cases of Potts' disease.

Mr. W. A. Lane reports a case (Lancet, July 5th, 1890) of Angular Curvature with rapidly developing Paraplegia, in which he removed the laminæ and spinous processes of the 9th, 10th and 11th dorsal vertebræ with bone force s. A large mass of granulation tissue was found and removed. Improvement took place quickly, and at time of writing, a month after, he had good sensation and could move his legs freely.

In the June number of this JOURNAL (vol. xviii, p. 911), Dr. Jas. Bell reports two cases of fracture of the 6th cervical vertebra followed by complete paraplegia, motor and sensory, in which he cut down and removed the laminæ of the 5th and 6th cervical. In both cases the cord was much disorganized, and

the operation, although well recovered from, was of no material benefit. Both patients died at the end of three days. Dr. Bell is now engaged in making experiments on dogs with the purpose of finding out if it is possible to reunite the divided ends of the spinal cord. In cases of fracture of the spine, it appears to me that the results of surgical interference will never be brilliant; the amount of injury to the cord which takes place at the time of the accident will of necessity render operative procedure of but little avail. The mere removal of fractured portions of vertebræ pressing on the cord will not restore its functions. Our only hope in such cases will be the possibility of uniting the divided ends of the cord; but even here, after the accident, ascending and descending myelitis might render even union of the divided ends of but little service in prolonging the life of the patient.

THE RADICAL CURE OF HERNIA.

At the meeting of the American Surgical Association, held in Washington in May last, Dr. W. T. Bull of New York read a paper on the above subject, giving the results of 154 operations (Medical News, July 5th, 1890, and N. Y. Medical Record, May 31st, 1890). The most essential feature of the operation was the ligature of the sac at the highest possible point. cases he divided into four series: (1) In 40 cases the sac was isolated and ligated with catgut. The portion below the ligature, when small, was dissected out; when large, or when it contained the testicle, it was drained, the wound sutured, and a drain left in several days. (2) 39 cases treated by ligature of the sac, as before, but catgut sutures were applied to the pillars of the external canal and to the divided aponeuroses. (3) 39 cases treated by ligature of sac as before. The anterior wall of the canal was only divided when it was impossible to reach the neck of the sac in any other way; the canal was sutured with two layers of sutures. (4) 16 cases in children between the ages of 4 and 14 years of age. Of the total number, the hernia was reducible in 77, irreducible in 42, strangulated in 15; all cases in series 4 were reducible. There were 3 deaths in 134 casesone, an old man 80 years of age, from shock, one a case of strangulated hernia, and the third a man aged 26, where a large

amount of omentum was tied off, and who died from septic peritonitis. In 4 cases the intestine was opened in separating adhesions; the wounds were at once sutured and no bad results followed. By all the methods a number of cases relapsed; many were traced, and it was found that a large number relapsed, some 60 per cent.

### SURGERY OF THE KIDNEY.

Nephrorrhaphy.—Dr. W. Keen, at the above-mentioned meeting of the American Surgical Association, read a paper on Nephrorrhaphy. He stated it was always congenital, and more common than was thought. He had collected 128 cases of operations for the fixation of these kidneys, including 4 operated on by himself. Amongst these 128 operations there were 4 deaths. The methods of fixation are—(1) By passing stitches through the fatty envelope of the kidney. (2) By stitching through the fibrous capsule of the kidney. (3) By passing stitches through the parenchyma of the kidney. (4) Splitting and stripping back the capsule to obtain cicatricial union between the raw kidney substance and the surrounding tissues. The author favors the third method of operation. Silk sutures should be used and the external wound should not be sutured as it closes quickly. The patient should be kept in bed for a month, and when she begins to go about a well-fitting elastic bandage should be worn.

Renal Calculus with an unusual nucleus.—Dr. Kendal Franks (Brit. Med. Jour., July 5th, 1890) reports a case of renal calculus removed from a man aged 22, with a common sewing needle as a nucleus. How it got there he was unable to say; there is a history of his having swallowed a needle when a little boy.

After History of Cases of Nephrectomy — Dr. Mott records the case of a patient who was admitted into the hospital with severe vomiting, pain and feverishness; he was deeply jaundiced. Urine was passed in considerable quantity tinged with bile, and as there was a difference of opinion as to the cause of the symptoms, operation was not resorted to. Nine years before his left kidney was removed by Mr. Barwell for calculous pyelitis. The patient died about ten days after admission, and at the autopsy a stone was found in the ureter one and

a half inches beyond the pelvis. The right kidney was enormously enlarged and weighed 1 lb. 5 oz. There was no evidence of obstruction of the bile ducts, the non-obstructive jaundice being the result of the impacted calculus.

In the N.Y. Med. Record for August 2nd, 1890, a case is reported by myself of the after history of a case of nephrectomy. I removed the left kidney from a woman aged 24, in 1885, for calculous pyelitis. She remained well for three years, when pus began to appear in the urine, accompanied by pain in right side. Exploration was advised and declined. She was fairly well notwithstanding that at times she passed large quantities of pus in the urine. In April 1890 she was confined of her third child since the operation; from this time she rapidly sank, and only lived a few days after admission to hospital, passing but 4-10 ounces of urine in the twenty-four hours. At the autopsy the right kidney was found greatly enlarged, the upper half converted into a series of suppurating sacs, whose outlet was blocked by a calculus weighing 150 grains. Several small calculi were found in the sacculi.

Excision of Kidney for Hamaturia .- Dr. W. D. Hamilton, in an article entitled " A Report of Seven Operations on the Kidney" (N.Y. Med. Jour., Aug. 16, 1890), mentions a case in which he diagnosed renal calculus on account of numerous attacks of renal colic and hæmaturia. On cutting down, no renal calculus could be discovered, so the wound was closed and patient rapidly recovered. In a short time, however, the pain and hæmaturia returned, so a second operation was undertaken. The kidney was incised and still no stone found, so it was removed, and on examination no reason could be found for the bleeding, the organ appeared to be perfectly healthy, and no calculus could be discovered. The patient recovered from the operation and has been well ever since. The author states, as a justification of the operation, the fact that the young woman, who had been a confirmed invalid for three years, is now restored to health and usefulness.

In the same N.Y. Med. Journal Dr. F. Tilden Brown reports a Case of Severe Hæmaturia treated by Nephrectomy. In this case the patient, a married lady aged 26, had several very severe

attacks of hæmaturia with excessive pain, and produced by sudden exertion. The urine also contained pus. Renal calculus was diagnosed, and Dr. McBurney cut down on the kidney, explored it thoroughly, but could not discover anything wrong. He at once proceeded to excise the organ. The patient recovered and was completely relieved of her symptoms. The kidney was examined by Dr. Delafield, who found the mucous membrane of the pelvis considerably thickened and its free surface somewhat roughened. There was also a growth of small-celled tissue beneath the epithelium, which in places formed small papillae. There existed evidently a chronic pyelitis, and from the mucous membrane thus altered he thought much bleeding might come. He thought this had originally been produced by a calculus which had escaped in the blood-clots. These cases are most puzzling, and one is quite justified in cutting down on the kidney when there is pain and pus and blood in the urine. I cut down in such a case some three months since, carefully explored the kidney with sound, and incised the organ and explored carefully with the finger but found nothing. The patient recovered from the operation and is now well, has no pain, and no pus or blood in the urine. Before the operation the patient was unable to move about on account of the severe pain and the hæmaturia which took place on the slightest exertion.

### GENERAL SURGERY.

Sterilization of Catgut.—Dr. Geo. R. Fowler (N. Y. Med. Record, Aug. 16th, 1890) states that catgut may be perfectly sterilized by boiling in strong alcohol for one hour; it is not in anyway deteriorated by this process. The catgut is wound on ordinary small wooden spools which have been previously boiled in a solution of soda. One pint of alcohol is sufficient for sterilizing fifty metres of catgut.

At the recent meeting of the International Congress held at Berlin, Prof. Billroth read a paper on resection of the stomach and intestines; 140 cases were recorded which had come under his own observation. Twenty cases of pyloric resection had been operated on by himself, half of which died from the operation itself. All were the subject of cancer. Where much in-

filtration existed operation was almost impossible. Of those who had survived the operation four or five had lived in comparative comfort for a few months. Two cases had survived for one year to one year and a half, one case had survived two years, and one was alive five years after operation. Twenty cases of gastro-enterostomy were reported; they had all been attended by temporary success. On eight or ten occasions the cacum had been removed, but the operation, which was always difficult, did not yield satisfactory results.

The Treatment of Pyloric Carcinoma.—Mr. F. B. Jessett reports two cases of gastro-enterostomy for pyloric carcinoma (Lancet, July 12th, 1890), in which Senn's bone-plates were used. One patient, aged 61, died from exhaustion five days after the operation; the other patient recovered. Mr. Jessett has now records of seven cases operated on in this way, and none died from the operation—that is, although two died, yet the operation was a success, as there was perfect union between the stomach and intestines in both cases. These cases he believes would have recovered had they been fed earlier. Mr. Jessett dwells on the importance of uniting the jejunum to the posterior wall of the stomach instead of the anterior; he thinks this avoids all risk of kinking of the intestine.

Mr. H. G. Rawdon, of the Royal Southern Hospital, Liverpool (Hosp. Mirror of Lancet, April 12th, 1890), reports a successful case of pylorectomy for carcinoma. The stomach was sewed up all but one inch, and the duodenum was similarly treated; then Senn's plates were introduced and the parts brought together. The patient, a man aged 55, made a good recovery. He was supported by nutrient enemata for the first six days.

Dr. W. T. Bull last April, at the New York Hospital, excised the greater portion of the stomach for carcinoma. The cut ends of the stomach and duodenum were sewed up, the edges being inverted and a Lembert's suture employed; then the jejunum was joined to the stomach by a separate operation as a gastro-enterostomy by Abbé's rings. The patient, a woman aged about 30, recovered rapidly, and when last heard of was quite well.

Expectant Treatment versus Laparotomy for Gunshot Wounds of the Abdomen.—Dr. R. W. Keene of Versailles, Kentucky.

reports three cases of gunshot wound of the abdomen (N.Y. Med. Record, July 19th, 1890) successfully treated without operation. Case I, a youth aged 20, was shot with a 31-calibre pistol-ball on June 26th, 1888, immediately below the umbilicus. When seen next day there was considerable pain, some vomiting, and tympanites, but no shock; later, vomiting became very severe, but the bowels moved freely, and patient, under hypodermic injections of morphia, went on well, and was about in two weeks. Case II, a boy aged 11, was shot with a 32-calibre pistol ball 24 inches below and 1 inch to the left of the umbilicus, on Aug. 3rd, 1888. There was no shock, but much pain and some tympanites. Morphia was administered on August 6th; the temperature was 102°, pulse 112, and some tympanites. A saline purge and an enema were given, which freely moved the bowels. From that time patient recovered without a bad symptom. Case III, a youth aged 19, was shot with a 22-calibre pistol-ball on June 3rd, 1890, one inch to left of umbilicus; no shock. Next day, temperature 100°, pulse 62; no vomiting or tympanites. Was going about as usual at the end of fifteen days. In these cases there was no indication of immediate necessity for operative interference. Dr. Keene did well in treating them expectantly.

Surgical Treatment of Tumors of the Bladder.—In a paper on the above subject, Dr. P. S. Conner of Cincinnati (Annals of Surgery, July 1890) comes to the following conclusions:—
(1) Only after operation is there much chance for recovery from any kind of vesical tumor. (2) That an operation should be done in all except the least and most severe cases. (3) That, as a rule, in males the bladder should be opened above the pubes.
(4) That the removal should be made as complete as the situation and extent of the growth will permit. Appended is a table of published operations on the bladder, 68 in women and 133 in men, with a death-rate of 28.3 per cent. by the perineal operation and 29.4 per cent, by the supra-pubic.

A Simple Method of Fastening in situ an Elastic Catheter After Perineal Section.—Dr. Lauenstein of Hamburg (Central-blatt f. Chirurgie) says that for the purpose of fixing an elastic

catheter in the urethra during the first few days following perineal section for deep urethral stricture, he employs the following method: A silk thread is tied around the catheter at a point opposite the wound in the urethra, leaving both ends of the thread sufficiently long to allow their being passed out of the perincal wound when the catheter is passed into the bladder. The wound itself is then packed with iodoform gauze, the free ends of the threads being finally tied over the latter; this serves the double purpose of fixing the catheter in situ and retaining in place the wound dressing of iodoform gauze. In a case reported, the first redressing occurred in six days, and the catheter was retained for twelve days. Healing per primam of the urethral wound took place, except at the points where the threads passed out. The perineal wound had entirely closed at the end of six weeks.—
(Quoted in Annals of Surgery, July, 1890.)

Resection of the Liver and the Regeneration of this Organ. At the recent Congress of German Surgeons held in Berlin, Dr. Ponfick of Breslau reported some experiments he had made on the liver in rabbits. He chose the rabbit because the liver was strongly developed. He did not excise portions of liver with the thermo-cautery, but with catgut ligatures. If a quarter of the liver was excised, the animal stood the operation well; but if half the organ was removed, the animal, for the first few hours, lost its appetite, became feebler, but by degrees it recovered, and the greater number survived for some months; 100 rabbits were experimented on. If three-quarters of the liver were removed the disturbance produced was still greater; 12 rabbits survived this operation. Dr. Ponfick does not believe that the removal of more than three-quarters of the liver is compatible with life. The most remarkable fact noticed in connection with these experiments was the rapid regeneration of the liver, and that the amount of regeneration exceeded the quantity of liver removed. In a case where he removed three-quarters of the liver in a rabbit the whole right lobe was regenerated and increased in volume; it presented an irregular surface. This reproduction is very rapid. In one case the rabbit was killed five days after excision of a portion of the liver, and on examination the regenerated

portion amounted to 80 per cent. of the amount removed. In all his operations he never had any peritonitis.—(La Semaine Médicale, 16 April, 1890.)

Etiology and Surgical Treatment of Septic Peritonitis .-In an editorial in the Annals of Surgery by Dr. Geo. N. Fowler an extract is given of Reichel's paper on the above subject (Deutsche Zeitschrift f. Chirurgie, Bd. xxx). The absence of evidences of peritoneal inflammation in those who have died after laparotomy does not necessarily combat the belief that the cause of death was due to septic intoxication, for it is observed that persons dying from ileus and with intestinal paralysis resulting therefrom perish from sepsis before the occurrence of peritonitis. In experiments on animals Reichel found wide and unexplainable differences in individuals in respect to the susceptibility of the animal itself, as well as to the ability of the peritoneum to absorb septic material. Reichel's studies upon septic peritonitis following laparatomy are based on 174 cases occurring at the Berlin Gynæcological Clinic. In general, the simpler and more uncomplicated the operative procedure the more uninterrupted the course of recovery and the better the prognosis. Abdominal ascites, or the presence of fluid which has escaped from cysts in the peritoneal cavity, is an unfortunate complication, at least 22 per cent, of the fatal cases dying from sepsis arising from this cause. Exploratory incision in those cases which proved to be malignant seems to have been not without danger, 20 per cent. dying from infection following these operations. Peritonitis arising from the bursting of the pedicle of an ovarian cystoma does not necessarily give rise to sepsis nor increase the danger thereto, save that it gives rise to a large number of adhesions and increases thereby the amount of wound surface exposed by the The belief of Kümmel that even in the most carefully conducted antiseptic laparotomy germs will find their entry into the peritoneal cavity is supported by Reichel. The explanation of the immunity from sepsis which these patients enjoy is to be found in the rapidity with which the effused peritoneal fluids with the germs are taken up by the serous membranes and transferred to the blood current, from which latter they are

readily eliminated. . . . . . The method of Mikulicz of packing iodoform gauze into the peritoneal cavity is objected to on account of the danger of iodoform poisoning as well as those which may arise from removal of the gauze. There is also danger of ventral hernia. Experimental attempts to successfully treat septic peritonitis artificially produced in animals were almost entirely without success. Irrigation of the peritoneal cavity with sublimate, chloroborate of soda, salicylic acid, etc., were useless. The animals quickly perished. Laparotomy performed after the introduction of faccal matter for the purpose of cleansing the peritoneal cavity, and prior to the development of peritonitis, resulted in the same way. Irrigation, says Reichel, is not only useless, but even in healthy animals proved to be injurious. Somewhat better results were obtained by sponging gently the peritoneal surfaces with bunches of gauze and employing the gauze in the drains of Mikulicz. In nine experiments on dogs, two recovered by these means. The author is skeptical concerning the value of surgical treatment of peritonitis, except where the septic peritonitis is encapsuled, due to intestinal perforation, and in which there exists an early opportunity of cleansing the cavity and closing the perforation.

Operative Treatment of Dislocations Irreducible by Ordinary Means.—Mr. Mayo Robson (Lancet, July 26th, 1890) gives notes of several cases of dislocation which after ordinary means of reduction had failed. Joints were explored through an incision and either reduced or otherwise treated. In one case, that of a boy aged 11, who was seen four weeks after a dislocation of the elbow backwards, an incision was made four inches in length over the elbow joint; the triceps tendon was divided and the joint opened. It was then seen that the coronoid process was broken off and fractured into two parts, one being attached to the brachialis anticus and the other to the stump of the coronoid process. The external lateral ligament was ruptured, and through the rent the head of the radius was thrust. On division of the ligament the dislocation was reduced, the parts slipping easily into position. The joint was well irrigated with sublimate solution, the triceps tendon stitched, and the wound closed. The arm was put up on an internal rectangular

splint. The wound healed by first intention, and two months later the patient had a good, freely movable and useful elbow joint. In another case of dislocation of the elbow, the capitellum of the humerus was broken off and fixed to the coronoid fossa by callus, so to get a movable joint the lower end of the humerus had to be removed. The patient recovered with a good. useful clbow. In a case of dislocation of the right hip backwards in a man aged 35, in which reduction failed by manipulation and pulleys, the head of the femur was cut down upon and freed from its attachments, and still reduction could not be accomplished. On further examination it was found that the acetabulum was filled with callus; the head of the femur was therefore removed and the limb brought into fair position, and was kept there by a splint. After nine months the patient could move his thigh freely, and could walk well with the aid of a stick. In conclusion, the author says he has never seen any harm, but always benefit, result from this operative treatment, and he feels justified in advocating a resort to operation in all cases of irreducible dislocation, when the general condition of the patient is such as to warrant belief that he will bear operation.

New Operation for Prolapsus or Procidentia of the Rectum. -Brigade-Surgeon McLeod, of the Indian Medical Service, relates a case of prolapse of the rectum (Lancet, July 19th, '90) in a Hindu youth of 19 years, for which he performed a new operation after trying various other methods. The surface of the prolapse having been washed well in a 1-10 solution of carbolic acid, it was reduced and the left hand passed up into the abdomen, and the fingers made prominent above Poupart's ligament, care being taken to remove the small intestine inwards. A long steel acupressure needle was now passed through the abdominal parietes into the cavity of the gut, guided across its interior by the fingers, and passed outwards until it emerged about three inches from its point of entrance. This needle was placed parallel to and about an inch above Poupart's ligament; another needle was inserted through the bowel and abdominal wall about three inches above this one, and rather external to it, 80 as to secure the intestine in an oblique position from below upwards and outwards. The upper end of the rectum or the

lower end of the sigmoid flexure was thus temporarily fixed in the desired position by these two needles. The hand was now withdrawn from the rectum and the permanent stitching proceeded with. An incision about three inches long was made between the needles, at right angles to them, and in the long axis of the intestine, as near the middle of the affected part as possible. The abdominal wall was divided until the parietal peritoneum was reached. The left hand was now introduced into the interior of the bowel to avoid puncture of the mucous membrane, and, guided by the fingers inside the bowel, two series of loops of silk thread were inserted, four on each side, about an The lips of the abdominal wound were brought together by another row of stitches, with intermediate horse-hair ones, which also penetrated the outer walls of the intestine. The patient recovered perfectly, and six weeks after operation was walking about apparently as well as ever, the rectum remaining in good position. It remains to be seen whether the cure will be a permanent one.

Treatment of Tubercular Joint Disease.—The latest methods for the treatment of tubercle have mostly taken the form of injections of antiseptic fluids. This has especially been the case with regard to tubercular disease of joints. Bruns and Krause (Centralblatt f. Chirurgie, No. 25, proceedings of German Surgical Congress, 1890) speak in the highest terms of the success of this treatment. Bruns has treated 50 cases, in all of which there was more or less improvement. Krause gives the results of 60 cases, the disease being far advanced in them all; of this number 13 were perfectly cured, no fresh attack occurring after one year. In the remaining cases, improvement was manifested in nearly all; two died, one from advanced phthisis and another from acute miliary tuberculosis. The best results were obtained when the knee was the joint attacked. In cases of tuberculous hip-joint disease, ankylosis nearly always occurred. In two cases of severe coxitis with numerous abscesses, erosion of cartilage and displacement of the articular surfaces, most satisfactory results were obtained. The treatment is easy to carry out. The injections are made with a strong exploring needle. The solution recommended by Bruns is one part of iodoform to 10 or 20 of

glycerine. Krause recommends a 10 per cent. mixture of water and iodoform, or a 10 p.c. emulsion of iodoform and glycerine. The injections should be made at intervals of two to four weeks, according to severity of case; four injections will generally be found sufficient. After injection, free movement of joint should be made to distribute the solution. If pus be present, first evacuate with trocar. The relief felt by patient is almost immediate.—(Lancet, July 19th, 1890.)

### Reviews and Potices of Books.

The Throat and Nose, and their Diseases. By Lennox Browne, F.R.C.S.E. With 120 illustrations in colour and 235 engravings, designed and executed by the author. Third edition, revised and enlarged. Philadelphia; Lea Brothers & Co. 1890.

The treatise of Mr. Lennox Browne now before us has been, during the last decade, regarded as the standard text-book on laryngology in our language. The first edition, which appeared in 1878, was very rapidly bought up, and was completely exhausted in less than eighteen months. Many important advances in our knowledge of throat affections has been made, more particularly, as the author points out, in the extension of our views as to the causation of laryngeal disease and the attention paid of late years to the condition of the nasal fossæ as constituting the first avenues of the natural breath-way. The chief feature of this new edition is therefore fully emphasized by the expansion of that portion of the volume which treats of intra nasal and naso-pharyngeal diseases. The author has given more space to the consideration of the tonsils and their diseases. Within recent years much valuable work has been done in this direction, and the subject has been dealt with in this edition commensurately with its importance. It is therefore with interest we turn to Mr. Browne's chapter on diseases of the faucial tonsils. These structures are described as being large lymphatic glands whose function it is to secrete leucocytes, which pass by diapedesis from the lymph follicles into the crypts and act as phagocytes or scavengers in the mouth and pharynx. The

idea is now gaining ground that tonsillitis is nearly always in association with abnormal states of the buccal secretions. Probably nine out of ten cases of tonsillitis are associated with the growth of micro-organisms in the mouth and throat—the buccal secretions are thus extrinsically contaminated. Under this heading we must include ordinary insanitary and hospital sore throat, together with the tonsillitis (whether membranous or not) of scarlet fever, diphtheria, smallpox, measles and typhoid.

It was long ago believed that the tonsillitis associated with the gouty and rheumatic diathesis, as well as that due to exhaustion and mental fatigue and that occasioned by an ordinary catarrh, were not catching, were of a non-opidemic form, and were not therefore connected with the presence of a micro-organism. Evidence, however, has been brought forward to show that acute rheumatism, and especially rheumatic tonsillitis, is a germ disease; and it is suggested that the secretions of the mouth and throat form a fertile culture ground for micro-organisms when the buccal secretions are intrinsically contaminated by the salivary and oral glands acting as extraordinary channels of excretion in catarrhal and diathetic states of the system.

With regard to the etiology of tonsillitis, the author has long been of the opinion that the rheumatic diathesis invariably exists in those patients who are subject to recurrent tonsillitis, and that the predisposing causes in the two diseases are identical. idea he long ago enunciated, and though it was received with ridicule in some quarters, he has now the satisfaction of seeing many others adopting his view of the connection. matic analogy is further carried out by the effects of treatment, the almost specific effect of guaiacum in tonsillitis being specially noticeable. Mr. Lennox Browne is partial, however, to salicylic treatment, and generally adopts it as preferable to that by aconite, "for one reason that it is of greater activity in preventing extension of the rheumatic process to either muscles or articulations." Additional chapters have been added, in which the diseases of the nose have been especially dealt with. We cannot speak too highly of the well-executed coloured plates, the handiwork of the author. They are true to nature, and will be found very useful in practice.

- The Essentials of Refraction and the Diseases of the Eye. By Edward Jackson, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine. And
- The Essentials of Diseases of the Nose and Throat-By E. Balewin Gleason, S.B., M.D. With 118 illustrations. Philadelphia, 1890.

This book has been written to meet the requirements of the pupils of the Post-Graduate School, since ophthalmology, even in an elementary form, is not a compulsory branch of undergraduate instruction in the United States. The authors have omitted anatomical and physiological descriptions, which can be found in text-books, of those subjects, and have confined their attention strictly to what they consider essentials. The work is written in a clear, concise style, and few words are wasted, but we cannot help thinking that a graduate seeking instruction in ophthalmology should master the leading treatises on such an important subject and not trust to an epitome of this kind. As the book is also being published in England and Australia, it will probably be found very useful by students preparing for the lower grades of surgical examinations in those countries.

The Treatment of Disease in Children. By Angel Money, M.D. (Lond.), F.R.C.P., Lond. Second edition. London: H. K. Lewis, 136 Gower street. 1890.

The fact that the work before us has, in so short a time, passed into a second edition is convincing proof that it was needed by the profession. As we did not notice the first edition, we may tell our readers that the author has succeeded in producing a very useful handbook dealing with a subject generally neglected in our medical curricula. There are not many medical men who begin practice without feeling that their knowledge of the diseases of children is defective, and in the matter of treatment they feel themselves very much at sea. Dr. Money's work at this stage of the professional career will prove itself useful, for it deals not only with those minor details of treatment which are so necessary in the management of children's diseases, but with the general principles of therapeutics. The outlines of diagnosis

are given, for, according as the author puts it, diagnosis is the Alpha and the Omega of treatment.

The two first chapters are devoted to general considerations of diet, hygiene and treatment, and here some valuable information will be gained which will help the family practitioner in many of the difficulties which lie in his path. The other chapters deal with diseases in the order usually followed in works of the kind. We especially commend those on rheumatism and on the diseases of the nervous system. The author has taken pains to provide his reader with an account of every treatment recommended, and in this direction he has perhaps gone too far, such notices being more suited to a large treatise than to a work belonging to a practical series of text-books. We would much prefer knowing what has been the author's experience of a certain treatment rather than that he should think it necessary to detail the manifold recommendations made by others whose experience has probably not been as extensive. A young practitioner cannot do better than to add to his library a copy of this work, for sooner or later he will find it a friend in need.

Annual of the Universal Medical Sciences. A Yearly Report of the Progress of the General Sanitary Sciences throughout the world. Edited by Charles E. Sajous, M.D., and seventy Associate Editors. Vols. I—V. 1890. Philadelphia: F. K. Davis.

The Annual for 1890 is in no way inferior to its predecessors. When the idea was first entertained of publishing every year an extended synopsis of all the medical sciences, it appeared as if the task were too great and that the undertaking was on too large a scale to be practically useful. It has now been conclusively proved to the members of the profession that Sajous' Annual is a thing, like the telephone and the typewriter, that cannot be done without. It enables the medical writer to find references to the work he has in hand. The practitioner who is, or thinks he is, too busy to pick out the useful and profitable out of the mass of journals he is expected to read, will find compressed into these five volumes all that is worth reading of the publications of the preceding year. The specialist working at his own little corner of the field can, without much

unnecessary trouble, find out what is being done by other workers on other parts of the farm. In short, Sajous' Annual is a work no medical man can afford to do without, and a library cannot be considered complete without a file of it. Seventy editors are engaged in the compilation of the work, and over eight hundred medical journals are laid under contribution. The system of references is very easily understood, though we think that the reader would be placed at an advantage were the list of journals with their distinctive numbers to be placed at the end of each volume instead of at the end of the whole work. The illustrations are very numerous, and in their execution there is nothing left to be desired.

Practical Sanitary and Economic Cooking, adapted to Persons of Moderate and Small Means. By Mrs. Abel. The Lomb Prize Essay. Published by the American Public Health Association. 1890.

Recognizing the importance of good cooking from a hygienic standpoint, and probebly aware that the cooking of the working-classes is very bad, the American Public Health Association offered one of its prizes for a practical cookery-book suitable for that class to which culinary reform was so necessary. Seventy essayists competed for the five hundred dollars offered as a prize, and Mrs. Abel was the winner. We have looked into the book, and so far as we, in our great ignorance, can venture an opinion, it appears to be exactly what is needed. There is no doubt great waste and little comfort in American cooking, and we regret that it is our duty to charge the American housewife with being the principal cause of the national dyspepsia. No household is happy if the husband is uncomfortable and cross, and no husband can help being uncomfortable and cross when his digestive apparatus is up in arms and carrying on a warfare with a mass of ill-cooked food.

Essentials of Anatomy and Manual of Practical Dissection. By Charles B. Nancrede, M.D. Third edition. With thirty colored lithographic plates. Philadelphia: W. B. Saunders. 1890.

Our opinion has already been expressed regarding these Question Compends got up to aid lazy students. Although the authors always state that the object is not to supplant larger

(and better) works, yet such is their tendency. The volume under review has reached its third edition, and appears to be popular. This edition has been adorned with colored plates of the vascular system reproduced on a small scale principally from Quain's plates of the arteries, with a few from Savage, Nuhn and Hirschfeld. They are certainly very well done, and would serve their purpose quite as well if issued as an atlas, quite distinct from the Question Compend.

#### BOOKS AND PAMPHLETS RECEIVED.

- Extra-Uterine Pregnancy, The History of, by Dr. G. W. Miltenberger. Laparotomy for, with a report of a successful case, by Dr. T. A. Ashby. Review and Discussion, by Dr. H. H. Kelly. Published by order of the Obstetrical and Gynecological Society of Baltimore.
- Recollections of General Grant, by Geo. W. Childs. Philadelphia, Collins Printing House. 1890.
- Lectures on Some Points in the Treatment and Management of Neuroses, by E. C. Seguin, M.D. Providence, R.I.
- Proceedings of the Canadian Institute, Toronto, April, 1890.
- On Perincorrhaphy by Flap-splitting, by Fancourt Barnes, M.D. London, John Bale & Sons.
- The New Treatment of Peritonitis, by Emory Lamphear, M.D. Kansas City, Mo.
- Eighth Annual Announcement of the Woman's Medical College Toronto.
- An Examination of the Kneo-jerk in Sixty-two Cases of Interstitial Inflammation of the Cornea, by W. Lang and Casey A. Wood, C.M., M.D. Reprinted from the Royal London Ophthalmic Hospital Reports. Docember, 1889.
- A New Operation for Prolapsus of the Anterior Vaginal Wall, by Andrew F. Currier, M.D., New York.
- Biennial Report of the President of the Board of Health to the Legislature of the Hawaian Kingdom. Session of 1890. Honolulu, printed by the Hawaian Gazette Co. 1890.

### Selections.

# ABRIDGED REPORT OF THE ADDRESS IN SURGERY,

Delivered at the Meeting of the British Medical Association in Birminghum. By Lawson Tait, F.R.C.S. Edin.

Mr. President and Gentlemen,—I do not know that there is any position in which one who practises the handicraft of surgery could feel a more weighty responsibility than that which I now occupy, and if responsibility is the best measure of dignity, I frankly acknowledge that there is no position in the whole wide world that could by any possibility be conferred on me which I should regard as a higher honor than that which I am about to try to fill worthily in addressing this great Association on the subject and object of my daily life. From the earliest time of which we have any historic record, mankind has ever been earnest and selfishly sincere in his efforts to diminish suffering, to prolong life, and to cure disease. ration after generation has made fresh efforts of its best and greatest in such directions as these, and ever and anon fresh victories have been won. That we have made mistakes, that we have had to confess that our favorite theories and some of our best established practices In one generation have become the flogging posts in the next, is but to confess that we are It is not necessary that I speak for the importance and dignity of our work, for that is admitted on all hands, even with full knowledge of our shortcomings. Humanity has, on the whole, a complete confidence in us, not that we are perfect, but as far as we are so approached we honestly do the best we It behaves us, however, from time to time, to search out the innermost corners of our chambers, to rid them of all uncleanliness, and then to garnish them and to set them in order, hiding no blemish, but striving in all ways to the perfection of that noble work to which we have set our hands.

You have come to a great home of industry, the very paradise of the handicraits. To look at the work, you may think that as little skill as exists in human sense would be required to cut an ivory nut into what they call blanks in a manufactory of buttons, but as you watch the patient workman for a few hours, and then think you would like to try to rival his skill, you take your place at the saw bench, and if you are not preternaturally skilful it will be only after sacrificing a few of your fingers that you find yourself behind him inexplicably in every conceivable way. You would then begin to appreciate the principle we all value here so much, for it constitutes the making of our factories,—I mean the principle of the subdivision of labour. In such an apparently rough, and certainly

very humble, employment as that of the cutter of the button blanks, which I have taken as my text, a few questions will help us to much thought, and the answers may excite in many of us solutions for problems which are now greatly exercising the authorities of our medical corporations. You will find that even the cutter of the ivory nut will prove to be a more docile apprentice and a more competent workman if he has had a good education before he enters the shop, such an education as we supply now in our Birmingham schools, in a fashion compulsory and almost free. I wish it were entirely free. philosopher who asserts that liberal education will spoil the future craftsman is a more bookworm, without a true knowledge of human powers. We further find that our button cutter must go through a long apprenticeship to accustom his eye to judge the nut, to avoid its faults, to accustom his fingers to the sense of resistance, and even his ear to the sound of the saw. Mere general education will do nothing of this kind for him. but the general training he has had will open his mind to the advantage of accuracy in all things, and so much the more receptive for the monotonous details of his work.

We may easily, and I think justly, apply these facts to the training required by our own handicraft of surgery. Everyone has something to say on this subject, and I do not see why I should refrain from expressing my views, especially when I find that the general course of opinion is running at the present moment on lines on which my own has always lain. A surgical craftsman must be a trained gentleman, accustomed by a classical education to use his native tongue with ease and fluency and without confusion. He must have the fundamental principles of reasoning and of business habits instilled into him by such mathematical training as will be involved in his being able to pass some one of the ordinary examinations now insisted upon by all the licensed bodies. If he can spare the time and money to become a graduate in Arts, so much the Up to this point we are all agreed. Our apprentice surgeon has now to enter upon his purely professional training and to learn the constituent parts of the body and their functions, and here comes in our first difficulty. I for one desire to raise my voice in protest against the absurd attention to detail and the enormous waste of time involved in the present biological training of the surgeon student. Let him be grounded in every fact of anatomy which may, under the rarest and most unlikely conditions, aid him to appreciate the results of an injury, or a displacement, or of a new growth; let him be grounded in all such items of information concerning the ultimate structure of organs and their mediate and immediate functions, and the changes to which disease subjects them. Let him be placed so constantly alongside somatic sections that he will not only learn his anatomy, but that he will never

forget it. Let him see things and think of them so often that he will, as it were see through his patient as this man sees through his nut before he cuts it up. But I plead most earnestly that your successors shall be spared that senseless grind at useless details of anatomy with which our own young memories were burdened—details which he can remember only by a demoralizing system of catch words—details which he prepares himself to forget the moment the necessity of examinations is over.

Still more strenuously I appeal that our student be altogether relieved from that senseless system of biological training which has set in as a fashion at Cambridge, at Oxford, and at Edinburgh. Not many years ago I attended a lecture on physiology given to medical students, which consisted in a explanations of a brase instrument resembling a model of Clapham Junction, intended to explain something about muscular fibre. I could not understand it, of course; I was too much of an old fogey, but I had this consolation, that when talking over it with my young friends who had attended the lecture with me, I found they could make nothing of it either, and it worried them as much as it had worried me. But there was a difference between us—it was demoralizing to them, for it discouraged them, and small wonder! And how angry they must feel, when they come to deal with human patients and human disease, that all these nonsensical details are of no use to them not even for the purpose of general training-when they find, in truth, that the time occupied in mastering such subjects has been absolutely thrown away. For students who are disposed to appear for a science tripos, or who have such a line of life open for them or the tendency towards it, who are possible professors of anatomy or biology, this kind of work is of course admirable; but of our medical students, nine hundred and ninety-nine out of every thousand will have to find their positions at the bedsides of their fellow-countrymen in times of accident and sickness.

I remember that we had to learn that the direction of the anterior cornu of the fourth ventricle of the brain ran a course which was backwards, outwards, downwards, forwards, and inwards, and we were enabled in the most improper way to remember these important facts by the word "bodfi." Has "bodfi" ever served any of you at the bedside? Is there any conceivable condition of human accident or ailment in which "bodfi" could assist you to relieve your patient? What I wish for our students is that they should go back to the institutes of medicine, and leave comparative biology to those who may be able to benefit by it.

Again let me remind you of the terrible task that we had to fulfil in committing to memory the names and relation, the ligatures and points of contact, of the bones of the wrist and

of the ankle-joints. To me this task has never served in the raintest instance. If, unfortunately, I had ever to submit one of my limbs to a joint amputation, I should most unhesitatingly insist upon the selection of that devised by Mr. Symc. The other more fanciful methods of amputation, I believe, are too constantly condemned for very many reasons. Still, it may be that occasionally-perhaps ten times a year in the whole population of England-they are performed. For some specific reason they are not performed by surgeons in the country, distant from reference libraries and anatomical museums, and men who elect to perform such operations can in the course of twenty minutes or half an hour master the relations of these bones sufficiently to enable them to carry out the particular object they had in view. The question which occurs to my mind with great force is, Can the occasional performance of these somewhat eccentric proceedings justify the infliction of the senseless labour of committing all these special peculiarities of these bones upon every medical student who has to appear for examination? I cannot imagine that the committal to memory of these peculiarities can in itself constitute any kind of mental training, and I think the present system of anatomical education involves a gigantic waste of time and a much frittering away of serious mental effort. As these words were gathering themselves in my mind, I turned to a number of the Journal which had just appeared, and therein I found a most interesting account of "Modern Assistants," by "A Sufferer," the sufferer in question being a practitioner who had, by reason of his work, to employ a recently qualified young man as assistant in his practice. In language far more trenchant than I can possibly employ he gives a line of argument which I appreciate to the full, and he finishes what he has to say in these words :--

"But no reasonable person can doubt the superiority of modern methods of training over old-fashioned ones. Our fathers made their apprentices pay them for the acquisition of practical experience, while we, more liberally, subsidize medical tyros to gain experience at our expense. Our predecessors thought that much could be learned of art and something of science in the surgery of the private practitioner and by the bedside of his patients; we, more modestly, hold that the necessary science can only be taught at the hospital bedside, even when overcrowded by a hundred students, while art we practically ignore. But wisdom, after all, is justified of her children, and modern methods can proudly point their resultant -the modern assistant. In face of such a practical proof criticism is silenced. 'Of course you can vaccinate?' said a surgeon to a doubly qualified and newly fledged assistant the other day. 'No, I cannot,' was the reply. 'Of course, I hold the certificate of proficiency in vaccination, but I never vaccinated

a baby in my life." Could anything be more entirely satisfactory and excellent than this, or more reassuring?"

In the old days-days which I can remember-it was charged against the corporations that they turned out a large number of ill educated empirical practitioners who knew nothing but their patients. Now, I say, the tendency is to turn out a still larger number, a very much larger number, of scientific young tyros who know neither patients nor their diseases till they have gone through a second pupilage extending for years after they have left their university. This second pupilage lies in the rough school of experience, and in its second training they will be found deliberately and at once to throw overboard at least two-thirds of what they have learned in the first. What the boy wants after his general education has been fully developed, and his fundamental knowledge of useful anatomical facts and physiological principles has been made perfect to the utmost of their extent for usefulness, and not one scrap beyond that is that he should be dealt with as we deal with the cutter of blanks in the button manufactory. He should be put at once into contact with his material. I therefore vote cordially with those who demand the restoration of the apprenticeship system in such fashion as modern requirements indicate. It is of course no longer to be a seven years slavery in mixing pills. and spreading plasters, for the modern manufacturing chemist does all of that for us now, but it should be a period of at least two years spent in learning how to deal with patients.

The road to success in the practice of our art lies not onty in knowing how to deal with discase, but how to deal with men and women while they suffer from it. Our biological practitioners have no experience of either of these lines of research. and they therefore fail miserably. I had to meet a most excellent and estimable practitioner of the old school in the north of England some months ago, and he told me that within a year he had had three assistants, all Bachelors of Medicine and Masters of Surgery from one of our most flourishing biological schools, "Sir, would you believe it." he said to me, boiling with indignation as he thought of the needs of his large colliery Practice, "not one of them could put on a splint | and the third was such an ass that he used to lecture a collier's wife on how fishes lost their eyes in coal-pits instead of supporting her perineum." I am speaking from a lamentable fulness of similar experience, and I feel that no other remedy is possible than that which I recommend, and the sooner we begin to cry out for it the better. Our corporations are deaf to our appeals upon such subjects, because their rulers no more understand the requirements of the general practitioner than they under-Stand the Confucian system of philosophy.

The Council of the College of Surgeons is directing its system of examinations more and more in the ultra scientific direction.

and the demand of the members of the College for a reasonable share of representation on the body which at present is the great manufactory of general practitioners of England is largely based on this preposterous blunder. As I read the questions put to the candidates at the College examinations, I wonder more and more how such a training as they involve can by any possibility suit men for the every-day work of country practice. The new scheme of the University of London under which the new University will be largely constituted by the two Royal Colleges will only go to perpetuate the mistake. With a spirit of selfishness which is inexplicable, this new institution is to be confined, so far as its government is concerned, to the eleven medical schools of the metropolis, including the School of Medicine for Women; and all discipline of education and control of examinations will rest in the hands of our metropolitan rivals. There will be, therefore, a constant struggle between those outside the charmed circle and those within its pale; and I speak for those of us concerned, as we are here, for a large and growing school, who will find ourselves greatly handicapped in the fight. But we shall not be easily beaten. We believe in teaching our students what they can best use when they enter upon their struggle for existence, and it is upon that kind of material we want to have them examined; we therefore propose to agitate without ceasing for a more direct representation of the body of the profession at those tables where the direction of medical education and medical examinations are controlled. Upon one point we are coming to an agreement, and that is a demand for the restoration of the practice of the apprenticeship. But I would carry it further. the student is attending to this most important part of his training, he ought at the same time—and now I am speaking for those who have to follow the craft of surgery—to be taught how to use his hands. I should send him, so many hours in the week, into the shop of the village carpenter; and I should have him trained to use a saw, a chisel, a plane and a skew, so that he should be able to make a long splint, if need be, as well as to put it on. And into the blacksmith's shop he should also go, till he knew how to strike properly with a hammer. Some of you may think this may be unnecessary; but if you could look with a workman's eye (as I can do, for I served my time at the lathe, the bench, and the forge) at a Fellow of the Royal College of Surgeons-I will not give his name, but you will find him in every large hospital in the kingdom—who used a saw for the first time in his life in the amputation of a human leg, and see, as I can see, what a horrible mess he makes of his work, you will agree with me that a training in practical mechanics is just as necessary (I say it is far more necessary) for a man who has to operate upon his fellow human bein;s as is a training in anatomy.

The great difference between the man who starts his saw cutting from the point of the saw and the man who starts from the hilt is just as great as-I think it must be greater thanthe difference between the man who amputates a leg without any kind of knowledge of anatomy and the one who has such knowledge fairly perfect. During the two years that our student spends in this practical training for his after-life he would unconsciously imbibe the fundamental principles of the scientific training which he would afterwards have to undergo; he would see for himself day by day the characteristics of wounds healing healthily, and how different they are from those of a wound indicating action the result of constitutional empoisonment. The meaning of these differences he would learn afterwards at his clinical school. At present he can babble about the theoretical causes of the changes, but of their real facts and phases of them he knows nothing. After his apprenticeship, as he heard in the academical rooms the explanation of the process of the healing of a bone, he could recall to his mind illustrations in the practice which he had already gone through, and the combination of the facts as he knew them, with their explanation, would impress the whole thing on his mind in a way to which at present it is a complete blank. As a matter of fact, at present in medical education the cart is being uniformly put before the horse.

Having now delivered my soul concerning the training which I believe to be essential for the craft of surgery, I fall naturally into the utterance of some words concerning the practice of the art, and I pause at the outset in absolute wonderment when I contemplate what has happened in my own lifetime. The year 1847 was the real birth-date of our work, when there first fell upon man that gentle slumber, anticipated in the beautiful legend of the Garden of Eden when Adam's rib was resected, but which was not brought into the region of actual fact till that memorable night in Queen-street when Simpson, Keith, and Matthews Duncan "were all under the table in a minute or two," to quote Simpson's own graphic description. What had gone before that time was mere groping in the dark, and what has happened since could never have been ventured upon

but for that greatest of all blessing—anæsthesia.

This, the greatest of all medical triumphs, at once broke down the farriers which had hindered the development of our art, and a vast change in surgical practice became apparent. Not only were the horrors of the surgical theatre banished, but the type of men who could and did practise surgery was altered—in some instances, though, not for the better. In the days before chloroform the man who "niggled" over an operation was avoided alike by patient and doctor. A man like Liston, whose manual dexterity is said to have almost approached the miraculous, had it all his own way. Syme returned from

London to Edinburgh for many reasons, but no doubt chiefly because his comparatively defective manual dexterity was very apparent in contrast to many of those with whom he had to be rivalry. He never could cut decently for stone to the end of his days, and, but for the aid of the chloroform of his greatly disliked colleague, we never could have had the splendid philosophical principles of surgery which Syme laid down. He never could have been the surgeon he was without the encour-

aging influence of an anæsthetic.

In fact, the history of this epoch of surgery is one of the most interesting there is, and I venture to say by far the most important. Indeed, it is only by reason that we are more or less all part of it that we do not see how overwhelmiugly important the transition effected in the years 1850 and 1865 has been in the development of our art. In that time appeared men like Paget and Savory, who never could have been surgeons as Liston, Fergusson and Miller were, but who lived, and mostly are living still, to fill a higher and more useful post. They became the surgical pathologists, among the first of whom in date we have to put Stanley, and now they are a goodly army. They have lifted us from mere handicraftship to something approaching a science—approaching the position of a science more and more every day.

But, in addition to this, probably the best result of the change effected by anosthetics, another of great interest arose about the same time. With the possibility of human benefit came a huge extension of the number of cases not only of those suitable for the new work, but of those who could bring themselves to submit to it. Before the days of chloroform vast numbers of men died of stone in the bladder rather than submit to the torture of the operation. But nobody is now foolish enough to refuse to submit to it. Operations were comparatively rare, and they were made the subject of vulgar theatrical

display.

This strange perversion survives even to this day, and it makes me often sad to hear of the anxiety professed by many of my profession to "see" some great surgeon perform some big operation—an operation which they themselves would never entertain a wish to undertake. Such performances, I think, ought to take place only in the utmost privacy, and be witnessed only by such as can really be benefited by observing them—that is, men who wish to engage in operating practice and are likely to have fields in which to fulfil their wishes. Of course there are some operations to be excepted from such remarks, and the real intention of what I have said must be clear enough to everyone.

I have said the number of cases for operation vastly increased after the introduction of anæsthetics, and with this increase it became perfectly evident that no one man could grasp the

whole realm of surgical work. The subdivision of the work became inevitable, and the best and first example of this sub-

division came in ophthalmic surgery.

I have not asked Sir William Bowman, nor have I inquired of Mr. Anderson Critchett concerning his distinguished father; I have merely gone to the old medical directories for dates, and I find the story teld concerning these two men to be as follows. In 1850 Bowman was assistant-surgeon to King's College Hospital and assistant-surgeon at Moorfields; whilst Critchett was assistant-surgeon at the London and full surgeon at Moorfields. Bowman left King's College in 1862 and Critchett left the London in the following year after a very short tenure of the full surgeoncy; and these dates are of the greatest interest, as they allow of just sufficient development of ophthalmic pathology by Helmholtz's great invention to have persuaded both of those of whom I speak that their true vocations lay at Moorfields, where they both remained till 1877, and that they could not well combine general surgery with their finer work on the eye. There are some of whom it would not be true, but as a rule it is now quite true that a man, to succeed in ophthalmic surgery, must practise it exclusively, and I fancy that any exceptions would go far to prove my rule.

In abdominal surgery nothing was really done, if we except the truly brilliant achievement of Ephraim McDowell, before the days of anæsthetics. It is true that in this country a few parovarian cysts were removed, and a still smaller number of very simple operations for ovarian tumours were completed; but there is little that, whenever any serious complication was met with, the abdomen was promptly closed. No solid tumour was completely and successfully removed till that now before us fell to the hands of my valued old friend, John Day of Walsall, who was gathered to the majority only a few months ago. The greatest advance of all—the intra peritoneal treatment of the pedicle by means of the cautery, in the hands of Baker Brown, giving a mortality of 10 per cent.—was the real starting-point of all our progress, and that proceeding would have been an absolute impossibility without the aid of an amesthetic. Then came Spencer Wells, who, with his precise, methodical plans and steadfast business-like habits, which have characterised all he has done, has established abdominal surgery as a distinct specialty.

As the practice of surgery has grown, so have the arrangements and provisions for its pursuit become enlarged and altered to suit the varying requirements. Great changes have been necessitated in our hospitals and in our medical schools—changes, again, to be traced directly to the inestimable benefit of anasthetics. When I came to Birmingham in 1870 there was practically no hospital between Summer-lane and Stafford or between Bath-row and Worcester. The towns round about

us were supplied by old-fashioned dispensaries, where bronchitis was treated in the winter and diarrhea in the summer. Serious accidents and important surgical cases were all joited into the General and Queen's Hospitals. Old John Burton of Walsall, aided by Sister Dore, had just begun to show, in 1870, what a cottage hospital could do. Now we have not only cottage hospitals innumerable, but we have palatial receiving-houses for accidents and urgent cases at Dudley, West Bromwich. Walsall and Rugby, and many other important centres. These local hospitals would do credit to any community, and the surgical practice in these institutions is quite brilliannt, as many of you know. We have now in our midst a Hospital for Diseases of the Eye superior to anything of the kind, and its four surgeons, engaged exclusively in special work, are not excelled in the excellence of their results throughout the wide world. Here, more than anywhere, can be seen the triumph of anæsthetics, for not one of our modern advances could have been accomplished without them. Jean Louis Petit planned and described in detail the method of curing the troubles of gallstones in 1745, but they could not be carried out till our patients were soundly under chloroform.

In dealing with the third division of my subject, I have less clear ground upon which to go, and I fear I must depend more upon what I wish were the facts than upon what can be actually shown in their present existence. But I sincerely wish that we had better surgical results than we have; I wish we knew more exactly what they are; and, most of all, I wish that we could go about establishing them in a more logical fashion.

It has often been said that the greatest of the gifts of God which take the form of genius-I mean oratory-is the most potent of all for immediate effect, but most transitory for fame; and so it is with the sister his rionic art. The dead printed matter (all that we have left of John Bright) gives not the slightest idea of the great artist he was. The phonograph may alter all this, and the orators of the future may enthral audiences as much as the skill of Leonardo captivates you in the chapel at Milan just as it could have done four hundred years ago. We have no such promise for the fame of the surgical artist, for he and his handiwork perish alike, leaving nothing but the bald and printed statement of cases. The limner's work lives for almost all time. We have only one comfort. In the days which Edward Bellamy predicts, and for which William Morris pines, the limner and the surgical artist will be the only highly paid craftsmen, for their art will remain something unapproachable by mechanical contrivance. This may be or may not, but it is a compliment of no small excellence that so great an authority ranks our craft so high.

In the results of our work we have much more cause for congratulation, but 1 would rather look on the other side of the

fence and wonder if they could not be improved, even with the methods we have now at work. For the last twenty years we have first been opposing a great theory; then we have been accepting facts on which it was based; then we have been rushing into violent and illogical enthusiasm about it, only at the end of all to throw doubt and dispute on the whole field. I confess I always doubt surgical theories, just as I doubt all theories of art. No school of art which started on a theory has ever made a lasting impression. Our surgical theories never lead to anything; not even the great antiseptic theory has led to any tangible result beyond what every housewife knew before its day-namely, that dead, moist organic matter will decompose if some agent or other gets to it. We know now the exact nature of this agent, but this is a new fact, not a new theory. The theorists forget that living tissue will not decompose under the access of the same influences-influences, indeed which surround us at every moment of life, and pass by harmlessly. Now the theorists take a lingering farewell of their lost darling by saying, "Well, at any rate, it taught us cleanliness." matter of fact, the very reverse of this is true, for it was the arguments of those who opposed the antiseptic theory which demonstrated the successful cleanliness. The last phase of this discussion-I sincerely hope the very last-is the antiseptic acconcheur who pleasingly fancies that both his theory and his practice are new, whereas in matter of fact Semelweiss literally died for them nearly thirty years ago. No more instructive reading can be indulged in than a brief monograph which has recently been issued concerning the history of this truly great man-a man so great, that I think he deserves to have erected to his memory a statue in every civilized country. Semelweiss had no theory; he simply stated the fact that puerperal women in Vienna were poisoned by dirt. "Wash your hands," he cried, "and the women will not die," and his colleagues ruined him for his frankness. But he persuaded the world he was right. Simpson took up the fight with his accustomed vigour, and carried it through; and now, for sooth, we hear of the antiseptic theory as applied to midwifery as being a new thing.

What is wanted for the improvement of our surgical results is not any more theories, but better work and better systems of working, preceded by better systems of training. We forget that an art like surgery cannot be acquired by passing examinations. It is true that examinations admit to our academy schools in art, but they are merely for the purpose of selecting candidates upon whom it is likely that benefit will arise from the teaching which there can be obtained. Surgical art is not conferred upon the successful candidates by the College of Surgeons' parchment for the Membership, still less by that for the Fellowship. Like all arts, surgery requires some indescribable gift, easily recognized and appreciated when seen,

but wholly incommunicable by diploma or otherwise. With that gift the art may be acquired by persistent labour, but without the gift the labour is hopeless; and that this fact is being recognized in all our large centres of population, even in the close hospital corporations of the metropolis, is one of the most hopeful signs for better surgical results. Another hopeful sign is the demand for complete and accurate statements of results. Public attention is now being drawn very largely to the question of hospitals in general, and a most wholesome rivalry is being established upon the question of results. So much is this the case that grave suspicions are being entertained regarding all institutions who neglect or refuse to publish their results. I remember very well, when engaged some fifteen years ago in writing a book on hospital mortality, that I asked a large metropolitan hospital to furnish me with the facts of their amputations for a period of sixteen years. The hospital was notoriously reticent upon all such questions. The medical board answered my request by a resolution that it was not expedient to furnish me with the information required. I replied that if they did not furnish me with what I wanted within a month, I should publish their resolution in The Times, and, as this hospital was entirely dependent on annual subscriptions, they reconsidered their decision. Their amputation results were ghastly; probably they did not themselves know how bad they were. Publication of these results had a marvellous effect, for now the same hospital has an amputation mortality of less than one-half what it was sixteen years ago.

To Sir Spencer Wells is most undoubtedly due the credit of putting the publication of surgical results on a business-like basis. When the results in abdominal surgery, which began to be obtained about twelve years ago, were first published, they were so amazing that the favorite criticism of them was that they must be lies. This sort of thing at first was very irritating, and used to make me very angry; but for many years past I have ceased to trouble about it, and the incredible things of eight or ten years ago are now matters of every-day experience.

Another great advance required is the division of logical plans in recording and classifying the results and also the adoption of reasonable methods of conducting the investigation. For example, no one would now, in making a research on the mortality of amputations, arrange his figures without a careful separation of amputations for accident and those for disease, and a perfect arrangement of the cases according to the limb affected and the point of amputation. But until Simpson pointed out the necessity for such divisions, the importance of them was not clearly understood, certainly was not fully admitted. Arising out of a matter so simple as this there are, there must be scores of points which require settlement, yet

no serious attempt has been made even to indicate what such points may be. It may be, for instance, that one particular method of flap-making will suit primary amputations better than another, and a point so important could be settled in twelve months by a simple agreement amongst a group of hospitals and their surgeons. Let one set of men work steadily at one method for one class of cases, and another set at another method, and the statistical laws will be found faithful to the truth, as they ever are when the figures are large enough. Instead of adopting a method like this, our present method is that when such a point is raised for discussion surgeon after surgeon rises and gives vent to vague impressions, which he is pleased to elevate into the name of opinions. The fact is that everyone has been trying all the plans in a disconnected, illogical way, from which truth never can be evolved. One of the many things I admired about Tom Keith was the religious way he stuck to the cautery in treating the ovarian pedicle. Nothing could shake him. I was equally obstinate in my adhesion to the silk ligature. The result was that when we came to compare notes after many hundreds of ovariotomies, we found that, so long as the bleeding from the pedicle is effectually stopped, and the pedicle carefully dropped back into the peritoneal cavity, it does not matter a pin how it has been treated; and that, I venture to say, is a surgical conclusion, not only of the utmost importance, but one which never can be controverted. The so called discussion on special subjects which are now fashionable at our annual gatherings illustrate well how utterly futile our present method of research is. Take the case of the kidney. We have half a dozen men discussing such a question as that of removing a suppurating kidney as a primary operation or subjecting it to a primary drainage, and when you have heard all that they have to say, you are no wiser on the subject. But if four men would subject all their cases to one method, and four others would confine all their work to the second method, within five or six years the question would be definitely and finally settled. The latest instance of this kind is the question of lumbar versus inguinal colotomy, concerning which I am certain that the shield has a silver as well as a golden side, and that our present method will never enable us to differentiate the two methods.

It may be urged against my proposal that such a plan of research would hamper liberty of action, but I answer that our present liberty of action is not wise; indeed, it is not liberty at all, but licence. Let me take a personal case. It is well known that I adopt a special method of treating uterine myoma, and that there is a rival in the field in the shape of the electrolytic method. It is a charge also against me that I will not try the electrolytic method—a charge to which I readily plead guilty—and for this conduct my defence is simple.

I say that no logical and complete conclusion can be arrived at by everybody treating everything in every kind of way. Having opened out a continent, I want to know all about it. I pursue, therefore, all the windings of its rivers, I measure the heights of all its mountains, and I give you the results of my ten years' wanderings. Let the electrolycians do the same, and then you shall be the judges, not upon men, but upon principles. Meanwhile I am sure, in the interests of our art, that it is better that I should continue my research in a logical fashion, unhampered by qualifications which would make a just conclusion on your part an absolute impossibility, and which would lead to nothing in my own mind but confusion.

On the other side of this most important question lies another grave source of error, which is too true of our research into surgical results, though it is far more extensive in its results in general therapeuties in the practice of medicine. No sooner is a new drug placed on the market than everybody rushes to try it. At tirst all is well, and "rubbishin" is good for everything. Then come a few isolated hints about the "toxic effects of 'rubbishin'," and finally "rubbishin" gets dropped altogether and we hear no more about it. tively awful to think of what some of these new drugs-say chloral, for instance—may have done before they got settled. For the mischief that is done in this way the public is largely to blame-if, indeed, it is not wholly to blame; they like the idea of a new discovery, especially the upper classes, and I am told by men practising near the dwellings of the princes of the land and at fashionable watering-places that the great burden of their lives is to keep up with the new drugs and the new dodges. For my part, I instinctively distrust men who are always going in for new drugs, and, for myself, I will have none of them. In our surgical results there is too much of the same thing. Take the case of Dieffenbach's operation for squint, a most useful proceeding judiciously applied over a limited area. But I remember the time when every urchin with a squint was collared in the street and walked into the operating room to have one rectus divided in order that its opponent should have full power to swivel the eye out in the opposite direction. Everybody was "doing squints." Similarly, when removal of the uterine appendages was proposed, but long before the just and true principles on which it is now based could be formulated, everybody rushed into the trial of it, and the result was a disastrous epidemic, the chief burden and discredit of which fell upon me. I was more horrified than I can tell, and much of my time was taken up in disclaiming the doubtful honour of what was called "Tait's operation," in the performance of which every principle advocated by Tait was neglected or deliberately outraged. If the men who engaged in this work had waited for a reasonable trial, a fair

discussion, and a just verdict, much discredit for our art would have been spared us. The just verdict has now been arrived at, and the misrepresentation of which this operation was the centre has now ended. But the example is a very telling one in illustrating the want of logical application in our present method of research upon surgical results.

This vast and powerful Association could accomplish almost anything it wished after determining that it was for the good of the world, and after a reasonable method was pointed out for its accomplishment. We tried an expensive experiment in the way of a collective investigation, but from intrinsic reasons it was a failure. The fact is that its plan was lost in diffuseness and defeated by the machinery involving a vast number of contributors—in fact, to increase the means of success involved the very essence of increase of risk of failure.

If you want a thing done well, you must either do it yourself or trust it to a very small number of workers. I do not think it would be too much to ask our Association to place every new drug and every proposal for a new surgical proceeding under the observation of a small responsible committee, whose judgment should precede anything like a wholesale experiment by the professional public at large. This step would certainly clear away a vast amount of rubbish, and would direct more extended research into definite lines, instead of the indefinite and haphazard roads it now runs upon in almost every instance. And I cannot help feeling it would prevent us doing the great deal of harm which is now done in the early stages of even our best proposals.—Lancet, Aug. 2.

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### PURE SCIENCE AND PRACTICAL MEDICINE.

The Address in Surgery at the recent meeting of the British Medical Association, which we publish in this issue, is likely to interest everyone. Although few will agree with Mr. Lawson Tait on every point he has taken up, yet there is undoubtedly something more than a grain of truth in the statement he makes to the effect that there is a dangerous tendency in the present day to make the young practitioner too scientific and not sufficiently practical-to devote an undue proportion of time and energy to collateral sciences and laboratory pursuits at the expense of medical and surgical bedside work. sound grounding in the facts of science, in elementary chemistry, physiology and anatomy is a necessity no one will deny, and it goes without saying that these branches should be taught in laboratories and not in lecture-rooms, but the teachers should never lose sight of the fact that they are dealing with medical students who are seeking just so much elementary knowledge as will fit them for the due appreciation of their clinical studies. The object of medical schools is to make men medical practitioners, not to teach abstract sciences, and so long as but one grade of practitioner exists, so long as candidates for the degree have all to spend the same length of time at college-the limited period of four years-it will not be practicable to teach them thoroughly both experimental science and clinical medicine and surgery.

There is a vast deal of experience and observation required in the practice of medicine, and that school is the best which supplies most opportunities for bedside work, which should be supplemented by clinical and pathological laboratory studies, but it should be made clear to students that observation of sick people is of more importance than the chemical or microscopical examination of their secretions or the dissection of their bodies after they are dead. There has been undoubtedly of late an undue proportion of attention devoted to the chemistry, microscopy and bacteriology of disease, and not enough to the semeiology. Students are being encouraged to hunt for the tubercle bacillus in the sputum before they have learnt to distinguish a dull from a clear pulmonary note. There is such a thing as a bedside shrewdness which was cultivated to a remarkable degree before instruments of precision came to be used. If Hippocrates were to do a day's duty at the Montreal General Hospital we have no doubt but that we should find few mistakes in his diagnosis and prognosis. We must not forget that all or nearly all the good work of this century in connection with fevers-the work of Graves, of Jenner, of Shattuck, and others -was done without a clinical thermometer. We remember to have heard it said of the late C. J. B. Williams that the loss of his hearing in no way affected his powers of diagnosis in thoracic disease. It would seem that the educational cart is being placed in front of the horse, that the use of instruments of precision is being taught before the senses are educated. Mr. Tait is not alone in entertaining such opinions; on the contrary, there are many who, with him, advocate the restoration of the old apprentice system, and though this is certainly a swing of the pendulum in the opposite direction, yet it must not be forgotten that under this system were educated some of the brightest ornaments of the profession, and it is a question whether their successors will equal them in elevating and maintaining the standard of British medicine and surgery.

### PROTESTANT HOSPITAL FOR THE INSANE

The past month will constitute an era in the treatment of the insane in this Province, having witnessed the opening of the Protestant Hospital for the Insane. While it is to be regretted that a leaven of the much-to-be-deplored and decried farming-out system has, from lack of funds for its support, been forced

upon its managers, still, a wise proviso in its charter, to the effect that all monies accruing from whatever source must be spent upon the building and its inmates, will be a strong safeguard against the evils of this system.

The number of admissions to the new institution, up to the end of the month, has been thirty, and two patients have been discharged as recovered. Those admitted have all been outside cases, for as yet no transfers have been made from Longue Pointe. In order to accomplish this latter, however, forms have been prepared by which parties having friends or relations there may make a formal application to the Provincial Secretary asking for their transfer. A large number of such orders have already been filled, and it is expected the removal of the patients will begin next week. Blank forms can be obtained at the city office, Room 28, Mechanics Institute, or from Dr. Burgess at the Hospital, and friends wishing transfers made should lose no time in obtaining and filling them up.

Although much has been done at the new institution, much still remains to be done, but in a year or so it is to be hoped that it will rank among the foremost of our American asylums for the beauty of its surroundings and the good results accomplished.

### THE JOHNS HOPKINS HOSPITAL.

In the year 1873 Mr. Johns Hopkins, a wealthy banker of Baltimore, handed over to trustees, whom he had himself selected, a lot of land in Baltimore, together with a very large sum of money, for the purpose of building a hospital, which, to use the founder's words, "shall, in construction and arrangement, compare favourably with any other institution of like character in this country or in Europe." The trustees were not hampered by any selfish restriction, such as too often mars the good effect of modern benefactions. They were to build a hospital which was ultimately to contain 400 beds, and to effect this purpose they were to obtain the assistance of "those at home and abroad who have achieved the greatest success in the construction and management of hospitals." In addition to the hospital, a Home for Orphan Coloured Children was also to be established. The three-

fold purpose of a modern hospital was specially mentioned in the letter in which Mr. Hopkins announced his gift. His hospital must relieve the sick, educate physicians and surgeons, and train nurses. With this commission the trustees have spent the time from 1873, when the money was made over to them. up to 1889, when the hospital was opened to the public, in carrying out the wishes of the donor. No one who reads the description of the hospital, recently published, can fail to accord them the credit of having faithfully fulfilled the object of the trust. The hospital has been constructed under the superintendence of several experts, of whom Dr. Billings has been the guiding spirit. We have no space to enter into a description of the magnificent structure. We can but advise the reader to go to Baltimore and see for himself, or else peruse the description, of which Dr. Billings is the author. He will there find the plans of all the buildings, as well as photographic reproductions of both the outside and inside of the various wards and pavilions.

Johns Hopkins' gift has done good in a manner which even he, far-seeing as he was, did not expect. The building of his hospital is an epoch in the history of hospital construction. Its successes or its failures will be of service to the builders of other hospitals, and we venture to predict that for generations the building of no hospital will be undertaken without the experience and example of the Johns Hopkins Hospital being taken into consideration. The published description will form a standard treatise on hospital construction which is destined to find a place in every library of reference in the civilized world.

Medical Practitioners under the Old Regime.—Etienne Bouchard, who came to Canada in 1653, was the first surgeon to settle in Montreal. According to Parkman, in 1702 there was but one educated medical man in the whole country, Sarrazin, who was a famous naturalist as well as a physician, and who left his name to the botanical genus Sarracenia, of which the curious American species S. purpurea, the pitcher plant, was described by him. "His position in the colony was singular and characteristic. He got little or no pay from his patients; and though at one time the only genuine physician in Canada (Callières et

Beauharnois au Ministre, 3 Nov. 1702), he was dependent upon the king for support. In 1699 we find him thanking his Majesty for 300 francs a year, and asking at the same time for more, as he has nothing else to live on. Two years later the governor writes that as he serves almost everybody without fees he ought to have another 300 francs. The additional 300 francs was given him; but finding it insufficient he wanted to leave the colony. 'He is too useful,' writes the governor again; 'we cannot let him go.' His yearly pittance of 600 francs, French money, was at one time reinforced by his salary as member of the Superior Council.'—Parkman, The Old Regime in Canada. Eleventh edition. Boston; pp. 366.

GOVERNMENT MEASURES AGAINST HYPNOTISM.—As an outcome of the expression of professional opinion at the Birmingham meeting of the British Medical Association, a bill will be introduced into Parliament next session, the aim of which will be the restriction of the public performances of the hypnotic experiments which are now so much the fashion. There is no reason to doubt the evidence of mental experts to the effect that much injury is done to the health of the subjects of these public experiments.—(N.Y. Medical Journal.)

## Medical Items.

- —Dr. E. J. Bowes, final prizeman of the class of 1390, has been appointed surgeon to the Minnesota Iron Works, Soudan, Minn.
- —The will of Sir William Gull, M.D., Bart., which was proved in the Probate Office a few days since at upwards of £344,000, is said to be the largest sum ever amassed by a member of our profession.
- —The Medical Association of the District of St. Francis has elected the following officers:—President, E. D. Worthington, M.D.: 1st Vice-President, Thos. Larue, M.D.; 2nd Vice-President, F. J. Austin, M.D.; Secretary-Treasurer, J. O. Camirand, M.D.; Assistant Secretary-Treasurer, P. Pelletier, M.D.

A LICENSE IN NORTH DAKOTA.—According to the new law regulating the practice of medicine in North Dakota, no one will be allowed to engage in practice until he has passed an examination in all the primary and final branches. No one will be admitted to such examination until he has taken at least three courses of lectures of six months each. The examinations will be conducted by a Central Board, appointed by the Governor of the State. Dr. J. R. Logan (Trinity, '85) is Secretary of the Board, and Examiner in Diseases of the Eye and Ear and Nervous Diseases. Dr. F. N. Burrows (McGill, '85) is Examiner in Practice of Medicine. Dr. C. Maclachlan (Tor., '89) is Examiner in Obstetrics and Diseases of Women and Children. Dr. T. O'Brien (McGill, '84) is Examiner in Anatomy and Surgery. It will thus be seen that Canadians are well represented on the Board.—Canadian Practitioner.

SIR ANDREW CLARK ON HOSPITALS.—At the sitting of the 31st July of the Committee of Inquiry of the House of Lords on the management of the London Hospital, Sir Andrew Clark, who was examined as a witness, stated that he was first connected with the London Hospital in 1853 as assistant physician. He considered that the shutting up of the out-patient department of a general hospital would be the greatest calamity that could happen to the public, and most disastrous to the art of medicine. It was absolutely certain that the art of medicine could not be learned by the reading of books or from lectures; it must be acquired by practical observation. His experience of out-patient departments was that they were little abused. The advantages which the public derived were greater than the disadvantages and the abuses of relief which had been spoken of. Every general hospital should have a lock ward. There was room for a larger number of male nurses than are now employed. He thought the medical education in London was about the most practical education given anywhere in the world. In a small school, however, like Charing Cross or Westminster, they could not give such a complete and extended course of chemistry as was necessary for a student. He attributed the large influx of students

to Edinburgh, as compared with the small proportion to London. to the examinations in London, which were so complicated that the examiners even could not answer some of the questions. No honest, straightforward reading would ensure a student success; his only chance was that he might have the good luck to fluke Such a thing did not occur in the Edinburgh University. It was a good plan to have a resident physician in hospitals, but if kept for more than five years he became a nuisance. He should be a paid officer-not a member of the staff, and not under the control of the staff. As regarded the nursing, both day and night, in the wards of the London Hospital, which he controlled, it was as nearly perfect as he could expect to get in any institution. He was most strongly in favour of general hospitals with schools, as opposed to special hospitals, of which he had painful experience in regard to the conduct of those who He had no desire to cast reflections upon anyofficered them. body, but his first objection was that they magnified the complaints with which they had to deal. If there were a hospital for the great toe, the discoveries of diseases connected with the great toe and the literature that would be published on the subject would be most appalling; but if this work were done in a special department of a general hospital you would have security for the trueness and thoroughness of it. He would except the Cancer Hospital and the Moorfields Hospital. He thought cases of consumption should either be treated in a special ward attached to a general hospital or scattered through the wards.