appeared to have gained admission accidentally. The walls of the sinuses consisted of a layer of endothelial cells, external to which was a coat of connective tissue. This coat contained in nearly every instance a larger or smaller number of unstriated muscle fibres. The sinuses were usually well circumscribed, but in a few instances the walls were deficient at some part of their circumference, so that the sinus was in direct connection with the lymphatic spaces in the surrounding connective tissue. There was a good vascular supply to the tumour, and the arteries were remarkable for the thickness of their walls, a thickness due partly to an increase in the connective tissue elements of the middle coat and partly to an increase in the subendothelial layer. The sweat glands, the hairs with their follicles, and the adipose tissue appeared to be normal in every respect. There was no formation of lymphadenoid tissue in any part, nor, if the repeated inflammation to which the tumour had been subjected be taken into consideration, was there an undue proportion of small round cells in the connective tissue of the growth. The tumour was, therefore, a cystic lymphangioma agreeing in most of its histological characters with that described by Mr. Harold Stiles in the first volume of the *Edinburgh Hospital Reports*. The absence of a part of the wall in some of the cysts is interesting, for it shows how the more rare form of cystic lymphangioma may pass directly into a cystic hygroma, which is a little more common. The lymphatic swelling in a cystic hygroma or hydrocele of the neck consists of a single cyst, either simple or lobulated, which is deeper in its origin and has more complex relations than a cystic lymphangioma.

The treatment of cystic lymphangiomata, like the treatment of most surgical conditions, is open to the widest divergence of opinion. It appears that some cysts, even when they have attained to a considerable size, may disappear spontaneously, but it is unreasonable to expect such a disappearance in any individual case; and I believe that the proper course to adopt in this child was that of excision of the tumour. It seemed at the time a severe measure, for the swelling was situated upon the cheek, where of necessity nothing could be done to arrest hæmorrhage except the prompt application of pressure forceps to the bleeding points. The child, too, was very young; on the other hand it was healthy, the swelling was very unsightly, and the parents were anxious that an operation should be performed if it offered a reasonable chance of success. The result more than realised my expectations, for the wound healed by first intention, though it often happens that union is not kindly in such cases. As in all operations upon young children, where there is likely to be much loss of blood, an attempt was made to diminish the shock by putting the patient during the operation upon a water bed half filled with water at 110° F., and afterwards by keeping her more than usually warm.

The position of the tumour and the frequent attacks of lymphangitis prevented me from using, in place of the second operation, any of the methods which are available for the treatment of the larger nævi. Electrolysis at its best would have produced a fibrous tumour, and, this being removed, would have left a scar no less marked than that resulting from excision of the original cyst. Setons, even of the finest thread, I look upon as relics of a bygone surgery, whilst puncture and drainage I felt sure would be ineffectual. Simple puncture may be effectual in cases of hydrocele of the neck, for the tumour is only a single cyst, and in such cases it should always be tried before any more formidable operation is decided upon. It is easy to keep the cyst aseptic after such a puncture, and, if the fluid again collects, the patient is in no worse position than he was before, whilst if, as I have seen, the cyst does not refill the child is saved from an operation which always puts it in peril of its life either during the operation or from subsequent complications.

THE University of Utrecht (where Donders the great ophthalmologist and physiologist was professor) will celebrate the 26th anniversary of its foundation on June 22nd and five following days.

It is announced that Professor Zacharjin, of Moscow, will shortly resign his chair in the University of that city. Dr. Tschirkoff, Professor of Therapeutics in the University of Kieff, is spoken of as most likely to succeed him.

SYPHILITIC JOINT DISEASE IN CHILDREN.

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IN the following paper it is my intention to quote cases in support of some remarks made by me during the discussion on this subject which took place in the Section of Diseases of Children during the last annual meeting.

The effect of syphilis on the joint structures has received rather scant treatment from surgical writers. In most of the ordinary textbooks the lesions produced are dismissed very briefly, and by the student this affection is spoken about as if its occurrence were very rare. On the contrary, as time goes on, and more attention is directed to accuracy in diagnosis, no doubt many cases which are now considered tuberculous and anomalous forms of rheumatoid arthritis, will be relegated to their proper category. It is advisable, then, that the reports of such cases should be brought to light, so that not only will the frequency of these joint lesions be appreciated, but we shall be able to note the pathological subdivisions in which they may be placed.

In 1892, Mr. Jonathan Hutchinson, jun., as Erasmus Wilson Lecturer at the Royal College of Surgeons, delivered a very interesting address on the subject, and pointed out definitely the different pathological headings under which such cases should be grouped.

With trifling exceptions, the same pathological grouping holds good, whether the cases are due to acquired or congenital syphilis; in both origins of the disease, we presumably have analogous pathological forms.

In this paper my remarks have reference only to the lesions met with in children. Congenital syphilis, as we shall see later, claims one or two forms especially as its own. Many cases in older children may be due to either the hereditary or acquired disease. In an experience of some years among children at the East London Hospital, one is so struck with the frequency of the acquired disease as to cause a halt when classifying the cases as belonging to either one or the other.

Most of the cases appended were undoubtedly due to heredity, as the history shows. In the others, although actual proof was wanting, there is strong probability of this being the *fons et origo* of the disease: at the same time one remembers the possibility of these cases being caused by the disease acquired in early life.

Bearing the above remarks in mind, a classification of the joint disease in children may be made on the following lines:

1. Epiphysitis of infants.
2. Symmetrical effusions, usually from 8 to 15 years of age.

The above two forms are essentially associated with the congenital disease.

3. Osteitis (a) with simple effusion; (b) with gummatous infiltration of the synovial membrane and effusion.
4. Primary gummatous synovitis.

These forms are met with whether the disease be inherited or acquired.

Peribursal gummata, so frequent in adults round the patella and olecranon bursæ, I have not met with in children, nor have I been able to locate in children that rare pathological form, the chondro-arthritis described by Virchow, of which some admirable examples from adults were exhibited in the museum of the annual meeting.

I. EPIPHYSITIS OF INFANTS.

This condition is the earliest manifestation of syphilitic disease of bones and joints, the epiphysis being first involved, and almost immediately being attended by effusion into the neighbouring joint. The disease develops rapidly, and is accompanied by well-marked signs of inflammation. The affected limb seems to lose all power, and for this the child may be brought to your notice—pseudo-paralysis. There is a tendency for the epiphysis to become loosened, but with treatment fixation again takes place in most cases apparently without any subsequent alteration to the length of limb. As a rule the synovial membrane does not suffer much change, the fluid becoming absorbed, leaving the joint undamaged or with trivial adhesions. In

exceptional cases suppuration may occur, but if such be the case the possibility must be borne in mind of an additional infective process at work. The prognosis, if treatment be soon adopted, is favourable, especially if a single joint be attacked; if several joints are involved this appears to indicate a greater intensity of the disease, and is accordingly more fatal.

Epiphysitis of Upper End of Tibia; Effusion into Knee.—J. W., 1 month. December 30th, 1887. For four days swelling over upper part of right leg and knee-joint. On examination, leg oedematous below knee, and over its upper third it is reddened with pseudo-fluctuation. Fluid in right knee-joint and the upper epiphysis of tibia loosened. No enlargement of femoral glands. No evidence of umbilical ulceration. No other joints swollen. Pigmented spots about anus and wasting, but no other evidence of congenital syphilis nor any history of it. Resolved under hydrarg. cum creta.

Epiphysitis of Lower End of Femur; Effusion into Knee.—H. C. W., 6 months. December 7th, 1887. Began to waste at 2 months. Snuffles. No rash. Head rather bony; no craniotabes. No injury. For some days swelling about lower end of left femur and knee-joint, which is now oedematous with fluid in the joint. No history of miscarriages. H. C. W. is the third child; (1) alive and well; (2) died at 4 months of whooping-cough and bronchitis. Knee strapped with Scott's dressing and hydrarg. cum creta, gr. $\frac{3}{4}$ bis die given. By January 6th complete resolution.

Epiphysitis of Humerus and Femur; Effusion into Knee and Shoulder Joints.—H. J., 6 months. August 31st, 1886. Marked effusion into right shoulder-joint, which first appeared fourteen days before. For one week left knee had been swelling; this now had a little fluid in it, but the lower end of femur was much thickened and the limb was flexed. No snuffles and no eruptions. No history of injury. Mother had had nine children, with two miscarriages among the first four; had had sore throat and loss of hair, but no eruption. All the children were healthy except (2) had fits, was an idiot and died at 2 years; (3) died at 3 years of cerebral tumour with left hemiplegia; and (9) the present child. Scott's dressing and gutta percha splints were applied to the joints, and hydrarg. cum creta gr. $\frac{3}{4}$ bis die and pot. iodidi gr. 3 per diem given. September 7th, all effusion gone, but child very weak and wasted; given inunction of ol. morrhue. September 11th, died.

Epiphysitis of Humeri, Radii, and Ulnæ; Effusion into Elbow Joints.—A. W., 2 months. September 28th, 1886. Scaly eruption on arms, buttocks, and soles, very profuse and pigmented for three weeks. Snuffles and craniotabes. One of seven children; (1) died aged 4; (3) died at 16 months; and (4) died at 5 months. (5) and (6) had bronchitis as babies, but no eruption. Mother had miscarriage between (1) and (2), and ulcers on the arms four years ago. Dusting powder and hydrarg. cum creta gr. 1 omni nocte given. October 5th, swelling, with tenderness over lower end of both humeri, with slight effusion into elbow joints; pot. iodide given. October 12th, swelling of humeri gone; lower ends of radii and ulnæ swollen, with fluid in wrist joints. Rash on arms faded, leaving typical pigmentation. Diffuse redness of genitals and papules on abdomen and legs. Marked snuffles. Some development of Parrot's nodes. Ung. hydrarg. used on account of purging. Pot. iodidi gr. j. t.d.s. October 26th, marked wasting. Still swelling lower ends of forearms. November 2nd, died.

II. SYMMETRICAL EFFUSIONS.

These are almost without exception met with only in the knee-joints. The effusion is rapid and almost painless; it is not accompanied by any definite change in the joint. These effusions, which may be very extensive, as a rule are very responsive to treatment. They occur during the same period as interstitial keratitis manifests itself—namely, between 8 and 15. Since attention was drawn to these cases by Clutton in 1886 their occurrence has been frequently noticed.

We now come to the later manifestations of syphilis, those of the tertiary period, and the preponderance of cases finding their place under Section 3 (where the bone is first affected and the joint secondarily) will be noted. In adults certainly we may find a larger number having primarily synovial changes, but I do not think we have at present sufficient data to lay down authoritatively any hard and fast rule as to the relative proportion of one to the other.

III. OSTEITIS.

(a) *With Simple Effusion.*—In these cases, although the bone changes were very marked, besides the effusion there was no evidence of any involvement of synovial membrane.

Osteitis of Femur; Effusion into Joint; Gumma of Palate.—G. F., aged 3½ years, first came to me in April, 1892, with swelling of the left knee and pain in it which came on seven weeks before; the swelling started a fortnight afterwards. The pain gradually subsided, so that at the first attendance there was little complaint made of it. On examination there was found thickening of the lower epiphysis of the left femur, extending halfway up the shaft, over which no evidence of fluctuation could be got; there was fluid in the knee-joints. There was some thickening over the right tibia at the junction of the upper and middle thirds, and at the same level on the left side involving both bones. The right knee-joint was normal. Both corneæ were dotted with opacities, with some superficial loss of surface, evidently due to strumous ulcers coming on eighteen months previously. The child had very marked snuffles as a baby, but no rash was noticed. The mother had good health, and had had no miscarriages. She had had ten children, of which the patient was the youngest, but only three were living; (1) alive and well, (2) died after fall at 4, (3) alive, (4) died in convulsions at 13 months—all the above were

healthy as babies; (5) (6) (7) born dead, (8) and (9) both lived only a fortnight. She was given 1 gr. of iodide of potash thrice daily, and hydr. cum creta, gr. 1, night and morning. On May 31st a lump was noticed over the left parietal eminence which fluctuated; no injury to account for this, which had been coming one week. Her walking was better, and there was less swelling of the legs. June 28th. Thickening of femur not so marked, and no fluid in knee-joint; thickening over tibia and fibula almost disappeared; swelling on head the same. During July she hardly took any medicine, and in consequence, on August 2nd, the swellings were all again larger, so the iodide was increased to 6 gr. per diem. On August 30th the lump on the head had disappeared and the legs were nearly all right. From this date nothing was seen of her until August 11th, 1893. She then had a very painful periostitis over right tibia, which fluctuated; offensive discharge from the nose and enlargement of left preauricular gland; thickening of lower epiphysis of right radius, with some effusion into wrist-joint and tilting of hand to the ulnar side; periostitis also over middle of right ulna, at lower end of right femur, at lower end of left femur with effusion, and over middle of fourth right metacarpal bone. The nose was ordered to be washed out with boracic lotion, and internally she took 3 grains of pot. iodide with iron three times a day. On August 18th effusion into the right wrist and left knee more marked, and enlargement of vertical set of right inguinal glands. Iodide of potash raised to 15 grains daily. On September 22nd she came up with a broken down gumma over the hard palate, which had perforated into nose, but the other lesions were better. Liq. hydr. perchlor. m20; pot. iod. gr. 10; inf. get. co. 5j, t.d.s., given. From this time on she rapidly got well.

(b) *With gummatous infiltration of the synovial membrane, local or general, with effusion.*

Osteitis with Localised Gumma in Subsynovial Tissue and Effusion.—C. H., aged 10, was brought up to see me on June 18th, 1895, complaining of pain and swelling in the right knee. This had come on somewhat acutely during the preceding fortnight. She had received no injury. There was a large quantity of fluid in the joint, and the lower end of the femur was enlarged and tender. In front of the internal condyle, just outside the trochlear surface and fixed to the deep tissues was a nodular lump, evidently a gumma, involving both periosteum and subsynovial connective tissue; there was no thickening of the synovial tissue elsewhere. Over the knee were two or three old superficial pigmented scars. The knee had never been affected before. The left knee was all right, and no other swellings of bones or joints were found. The teeth were bad but not typical. She had never had bad eyes. There was no evidence of syphilis from the family history. The knee was strapped with Scott's dressing and back splint applied. Iodide of potassium (gr. v) with iron was given three times a day. On July 26th the fluid had considerably diminished and the tenderness was not as marked. The lump over the internal condyle was about the same; treatment repeated. She soon lost both the effusion and swelling.

Osteitis; Patchy Gummatous Thickening, with Effusion; Acute Genu Valgum.—E. W., a delicate-looking girl, aged 11 years, first attended the hospital August 12th, 1892, with swelling of the left knee-joint. This first came on with pain nine months before, and it was localised to the upper and outer part of the joint. She now does not complain much of pain except at night. The lower end of the femur was thickened in the lower third; the joint contained fluid, and the synovial membrane was thickened in patches. Over the external condyle, which was broadened from its antero-posterior axis, there was marked irregularity to be felt, indicating a very definite loss of substance over its articular surface and outer part. There was marked tenderness over the external condyle. With this irregularity (loss of substance) of its condyle there was genu valgum; this, the mother was absolutely certain, had only recently developed. There was very little, if any, thickening over the tibia. The circumferential measurement at the upper part of the patella was 12 inches. The right knee was sound. There was thickening over the upper third of the left radius, which had been present for six months, causing loss of movement at the radio-humeral joint, but not interfering to any extent with the elbow-joint. Her teeth were typically syphilitic. Her eyes showed dotted opacities in the corneæ (keratitis punctata); the right was first affected four years ago. She had been getting very deaf for eight or nine months. Both membranes were thickened, but no perforation. Watch and tuning fork not heard.

Both parents had good health, and had had four children, as seen below:—

1. Miscarriage at 7 months to start with.
1. Boy, aged 18, almost totally blind since 8 years old: then abortion at 4th month.
2. Girl, 11, the present patient.
3. Boy, 9½ } Quite healthy, both now and as babies.
4. Girl, 8 }

Her treatment was hydr. cum creta gr. ij night and morning, and 4 gr. of pot. iodidi three times a day. The knee was strapped with Scott's dressing. September 2nd. As left eye seemed rather inflamed, ung. hydr. ox. flav. with atropine used. On October 11th, the circumference of the knee was only 11 inches, and the tenderness over the external condyle was not so marked. There was some fissuring at the angles of the mouth. From this date she gradually improved, and on February 3rd, 1893, the following note was recorded: "Much better; all fluid gone from joint, and only a little pulpy thickening left; elbow not quite cleared up."

This case was a very interesting one, for if the mother's tale is to be credited, the genu valgum had its origin in the alteration in the line of the articulation brought about by the gumma in the external condyle. That there was considerable loss of tissue the marked irregularity to be detected showed, and the lessened resistance so caused may have reasonably induced the deformity.

Pathologically, one must suppose that the gummatous swelling, which, from the amount of thickening, had been considerable in the substance of the external condyle, had softened in its centre, and under the influence of the pres-

sure on the outer side of the articulation the articular surface had been crushed in.

This case bears a very strong likeness to one described by Mr. Jonathan Hutchinson in the Pathological Society's *Transactions*, 1887.

Osteitis; Diffuse Gummatus Thickening of Synovial Membrane; Effusion. K. C., 11 years, was brought to me on February 15th, 1895, with swelling of the left knee, which had been present for about twelve months. On examination the lower end of the femur was enlarged, and there was extensive gummatus infiltration in the form of a crescent in the upper pouch of the joint; it was apparently in the synovial membrane, extending from there upwards in the connective tissue beneath the crureus muscle; the skin and muscle were free over this thickening. The rest of the synovial membrane was very lax, and there was a considerable quantity of fluid in the joint. There was a second slight thickening just in front of the external lateral ligament, and some fulness behind due to fluid. The joint could be over-extended, and there was slight lateral movement. There was no pain complained of, but there was tenderness on pressure. She had also ulceration of the soft palate. Just to the left of the middle line was a vertical slit with ragged edges, but above this was a little transversely-placed scar. To the left of the slit the faucial pillars appeared natural, except that there was a well-marked adhesion passing from the posterior pillar, just above the level of the middle of the tonsil, to the pharynx. In the position of the right tonsil was a honeycombed excavation, the size of a half-crown, but yet its ulcerated surface was quite clean. A lump had been first noticed on the palate two years before, four months after leaving the Fever Hospital, the throat becoming gradually more painful, with difficulty in swallowing. Eighteen months ago she attended for this at the Throat Hospital, Golden Square. On the right side of the neck, at the angle of the jaw, is an old puckered cicatrix from glandular trouble some eleven months before. The lump got red and swollen, and then broke down in five or six little holes. Latterly she had been deaf on the right side, but had had no discharge from ear. She had also double congenital dislocation of the hips, the heads being just below the anterior spines with marked tilting of pelvis. Her walk was very typical. Eyes never been bad. Left lower canine teeth pegged. As a baby she had a sore mouth and spots on the body. The mother had had spots about her like ringworms, and on the left breast are scars which from her description of their appearance seem to have been gummata. She had had one miscarriage three years ago, and seven children, all of whom are alive.

1. Girl; quite healthy.
2. The above patient.
3. Boy, aged 8; had sores on abdomen and at anus.
4. Boy, aged 6
5. Boy, aged 5
6. Girl, aged 2
7. Boy, aged 11 months

All healthy.

The patient was given pot. iodid. gr. v, liq. hyd. perchlor. m₃₀, inf. gent. co 3ss t.d., with pot. chlor. for gargle. She attended for three weeks, and derived great benefit from the treatment. The throat showed signs of cicatrization, and the fluid diminished somewhat in the knee-joint. After this she ceased attendance, and went without any treatment until June 25th, when she was again brought to me, and presented the under-mentioned conditions: The lower end of the left femur was enlarged as before, but the thickening of the subsynovial tissue on the inner side of the trochlear surface was not nearly so marked. Over the outer side, however, a very different tale must be told. Here there was a large gumma the size of a five-shilling piece; the central slough was completely separated at its edges, but firmly attached by its "wash-leather" base to deep structures. As I feared it might possibly open up the knee-joint in its separation, the child was admitted into the hospital. Her throat was now practically quite healed; the portions of soft palate on each side of the vertical slit before described had become firmly united to the posterior wall of the pharynx, so that this central opening was the only communication between the nasopharynx and parts below. She was in the hospital for some weeks, and after energetic treatment she lost all the fluid in her knee-joint, the slough gradually separated and left a clear granulating surface without any accident befalling the joint. She went out perfectly well and has remained so since.

IV. PRIMARY GUMMATOUS SYNOVITIS.

Discrete Gummata in Synovial Membrane; Effusion.—D. G. first came under my notice in April, 1886, when she was 6 years of age. At that time there was an eruption of small scales on the extensor surfaces of the arms and on the buttocks and legs. Well-marked nodules were to be felt in the subcutaneous tissue of the buttocks and legs. There were enlarged glands and old cicatrices in the neck, and slight cough. She had had a similar eruption in the preceding spring. There was no history of any rash as a baby. Her father had recently died of phthisis; her mother had chest mischief with hæmoptysis; two brothers were quite healthy. There was no history of syphilis to be got from the mother; the only fact worth noting was a miscarriage just before this girl's birth. The case, then, appeared to be without doubt tuberculous, the rash being ordinary psoriasis guttata so common in tuberculous children, and the nodules those also found frequently in the same class of case. Accordingly she was treated with cod-liver oil and iron and arsenic. After a considerable interval she reappeared in my out-patient room on January 31st, 1893. She now had effusion into both knee-joints, especially marked on the right side. The joint capsules were rather lax, apparently from old distension, and in the synovial membrane were thickenings (gummata); the bone ends appeared normal. The upper end of the left radius was much thickened. There was a punched-out ulcer on the inner side of the right leg, just above the ankle. Several old white cicatrices were to be seen on the inner sides and calves of both legs. There were two glands in the neck, both just below the old cicatrices, which are rather pigmented and circular. She had not had bad eyes, and her permanent teeth were fairly good. Her treatment was pot. iodidi, gr. v, with cinchona t.d.s., and liq. cum creta, gr. j. t.d.s. Iodoform and vaseline was used to the ulcers. On February 14th she had developed a small

ulcer on the outer side of the upper third of right leg. Her knees were about the same. The right knee was strapped with Scott's dressing and fixed, and her iodide was increased to 10 gr. twice daily. She stayed away till April 18th, going for some weeks without any treatment, consequently the effusion into the right knee was increased. The ulcers seemed a little smaller. The same treatment was repeated and continued till June 2nd, when she was much improved. As she was anemic she was given in addition ferr. carb. saccharata, gr. x t.d.s. June 27th. Now no fluid in left knee, and only very little in the right. As the ulcers were tardy in healing, ung. hyd. ox. rubrum was used. August 1st. Liq. hyd. perchlor. 3ss. was added to her mixture, substituting hyd. cum creta. When she attended on August 25th the fluid in both knees was practically gone, and there was very slight evidence of any thickening, and after September 18th she stopped her visits, considering herself well. She came back again on January 8th, 1895, with a fresh effusion into the right knee, with thickening of the synovial membrane between the patella and internal condyle. The left knee was quite sound, and her ulcers were quite healed. There was some small glands in neck, just in the region of the old cicatrices. Her voice was hoarse, but nothing was detected. Her old treatment was repeated, and in ten days there was a very marked improvement. Foolishly she again stopped attendance for a month, so that at the end of February there was more fluid in the right knee, slight effusion into the left knee, and some effusion into the left elbow-joint, which had prevented extension for a week. Her iodide, gr. x, was repeated, with an increased dose of liq. hyd. perchlor. (mxl). She rapidly improved, but she soon ceased attending, and has not been to the hospital since.

This condition of the knee-joints I have never met with in any other child, but it resembles exactly cases seen in adults. There is no doubt in this case that the patient was the victim of both tubercle and syphilis (which is far from infrequent), and, after reading the earlier notes, some might be inclined to consider the former as the sole origin of her trouble. If the knee-joints had been tuberculous, they would be included in the special form associated with König's name, but from an experience of several typical cases of the latter, the joints bore no real resemblance, and, besides, the diagnosis was sustained by the associated periostitis and characteristic ulceration.

The cases described above are fairly typical examples of the various forms of syphilitic joints, and my paper, to me, will have borne some fruit if it only induces others to record their experiences of a similar class of case.

PERMANGANATE OF POTASSIUM AS AN ANTIDOTE FOR OPIUM AND MORPHINE POISONING.

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IN the BRITISH MEDICAL JOURNAL of June 22nd, 1895, there was published a paper by Dr. William Moor, of New York, advocating the use of potassium permanganate as an antidote in cases of opium and morphine poisoning. The paper gives details of the results of two experiments performed by Dr. Moor upon himself, which strikingly demonstrate his courage and belief in the powers of the antidote he recommends. On one occasion, three hours after a light supper, he took 3 grains of morphine sulphate, followed in about 30 seconds by 4 grains of potassium permanganate, both in aqueous solution. On the other occasion he took, about two hours after breakfast, 5 grains of morphine sulphate dissolved in a fluid ounce of water, followed in a few seconds by 8 grains of potassium permanganate, dissolved in eight fluid ounces of water. On neither occasion did he experience any ill effect from the narcotic poison. He recommends that in a case of opium or morphine poisoning 8 or 10 grains of potassium permanganate dissolved in water should be administered at once, and repeated at intervals of 30 seconds once or twice. He further advises that a weak solution of the antidote, about 1 grain to a tumblerful of water, should be administered by the mouth from time to time even after all the opium or morphine in the stomach is supposed to have been rendered inert. This is on account of the now well-known fact that morphine, after absorption into the circulation, either from the gastro-intestinal tract or from hypodermic injection, is excreted in considerable quantity by the stomach; the quantity of morphine thus excreted by the stomach after subcutaneous injection is about half the amount injected, and this excretion by the stomach continues for about one hour after the hypodermic injection of the morphine. It is for this reason that I have advised in my *Textbook of Forensic Medicine* repeated washing out of the