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ORIGINAL ARTICLES.

A CASE OF TRACHEAL AND BRONCHIAL DIPHThERIA.

(By Dr. Webster.)

Feb. 11th 1896.

Was called about 1 p. m. to see patient who was said to be choking. On inquiry was told that she had been suffering from an attack of Bronchitis for the last two weeks and had a sore throat for the past three days.

Found patient, female, age 20, weight about 100 pounds, in bed in semi-reclining position, supported by pillows, slightly cyanosed and with labored respirations.

Found left tonsil and fauces covered with characteristic diphtheritic membrane and swollen so that it extended to median line, touching uvula and pushing it a little to the opposite side. Respirations 40, temperature 102, pulse 110, voice hoarse and could only articulate in a whisper. From the above symptoms the membrane appeared to have extended to larynx if now lower. Advised removal to hospital, which was done about 7 p. m. In meantime ordered throat sprayed oh 2-2 with equal parts of Ho 22 and 1-400 Hg cl 2.

Patient placed in P. Ward at General Hospital and above spray used, throat swabbed oh with equal parts Tr. ferri perchlorid. and 1-25 Hg cl 2 whiskey given o.h. and put on liquid diet, 1000 units, antitoxine administered. Patient was a little more comfortable about 11 p.

m. when I last saw her for that day.

Feb. 12th. Saw patient about 8 a. m., breathing more labored, respirations 42., pulse 100. weak, irregular, temperature, which had fallen gradually during the night was now 98. cyanosis was more marked than on previous evening. She had passed a restless night without sleep, breathing difficult and profuse respiration.

Intubation was performed by Dr. Good and seemed to afford much relief. A tent of sheets was formed over the bed and a pan of hot water with oz. 1-2 of turpentine to the O. kept underneath. A weak solution of soda bicarb was sprayed over tube m. was seized with a violent fit of 1000 units antitoxine were administered. Temperature rose gradually through the day and at 4 p. m. was 100. At midnight she was resting fairly, and had the intervals of sleep during the evening; cough was rather troublesome through the day with some expectoration. Patient did not sleep after midnight and at 4.30 a. m. was seized with a violent fit of coughing and alarming dyspnea which lasted one or two minutes and almost caused collapse of patient. Relief was obtained by tube being expelled followed by a complete membranous cast of the Trachea and part of upper bronchial tubes, (specimen shown) breathing became easier immediately and patient had intervals of sleep and took nourishment. Urine was examined this morning and found loaded with albumen. The nurse had been unable to save a reliable specimen previous to this as patient was menstruating on admission to hos-

pital. 1000 units antitoxine were administered at 10 a. m., and patient passed a fairly comfortable day with frequent intervals of sleep lasting from 1-2 hour to 1 hour. Pulse remained weak and irregular, varying from 100 to 118, and respirations from 24-32 at different periods of the day.

Feb. 14. Received telephone message from hospital at 7 a. m. saying that patient had suddenly been attacked with violent fit of dyspnea and was not expected to survive was asked if Tracheotomy should be performed. I left it to their discretion though it was not likely to be of benefit in view of the distance downward that the membrane had previously extended. On reaching hospital found that the operation had been performed by Dr. Lawrence and McKay, no anaesthetic was required as no pain was felt. She was still deeply cyanosed and it was evident the membrane had reformed and extended below the point of operation. Administered hypodermic of 1-20 gr. strychnia. In a short time the dyspnea again began to increase until the respiratory efforts were so great that air was forced into the cellular tissue of the face, neck and chest, causing an emphysematous condition of these parts. Patient gradually growing worse and heart very weak and irregular, another hypodermic 1-20 gr. strychnia was administered about 1-2 hour after the first. This distressing condition continued for about an hour, when she began to improve slightly, but was still cyanosed at mid day with respirations shallow, 37, and beat still weak and irregular. During the early afternoon her condition improved, very little several small pieces of membrane and a quantity of mucus were coughed up through the Tracheotomy tube, necessitating frequent swabbing out of the tube. At 3.30 patient's condition was improving and 1000 units antitoxine were again administered later. She coughed up a membranous cast of a portion of the trachea about 2 1/2 inches long, but only about 1-2 the thickness of previous specimen. In the evening she had a short sleep and took nourishment. Saw patient at 11 p. m. Tracheotomy tube had been drawn out a short time before while patient was sleeping. The opening into the Trachea had closed, and as she appeared to

breath easier by the mouth, the tube was left out, wound dressed and allowed to heal by granulation.

Feb. 15th. Patient slept a little during the night and took nourishment well. During the day her condition improved slightly, heart more regular, but about same rate, respiration easier, no dyspnea continues to cough up small pieces of membrane at intervals, some of very small calibre. Temperature rose to 1.03 after last dose of antitoxine.

Feb. 16th. Patient continues to improve, emphysema has diminished in face and neck and to some extent in the chest; temperature steadily declining.

On the 17th urine was again examined and only slight amount of albumen found, this had disappeared at next examination on the 19th. Temperature continued to decline until the 19th, when patient had a few slight chills and a gradual rise took place reaching 104.5 on evening of 21st, but improved a few days after. Cough increased and a greenish, viscid mucus was expectorated for the next two weeks. Temperature did not remain normal for the whole 24 hours until March 1st.

March 7th left the hospital but was still very weak, unable to walk without support and with partial paralysis of larynx, could not speak above a whisper. This lasted for some weeks then gradually improved, but she did not regain her normal speech until four months after leaving the hospital.

The emphysema did not completely disappear from her chest until a few days before she left the hospital.

INTESTINAL PARASITIS.

Classification—

I.—Cestodd or flat worms.

- 1) *Tenia Solium.*
- 2) *Tenia Saginata.*
- 3) *Tenia Echinococcus.*
- 4) *Bothriocephalus latus.*

II.—Nematoda or round worms.

- 1) *Ascaris Lumbricoides.*
- 2) *Oxiguris Vermicularis.*
- 3) *Tricephalus dispar.*
- 4) *Ascaris Mystax.*
- 5) *Eustrangylus Gigas.*

Specimens--

1) *Tenia Saginata*, common tape worm.

2) Hydatid Cyst, *Tenia Echinococcus*.

3) *Ascaris Lumbricoidea*, round worm.

4) *Ascaris Mystax*, round worm of the cat.

5) *Eustrangylus Gigas*, in kidney of a husky dog.

1) *Taenia Solium*.—The armed or ordinary pork tape worm. The *tenia solium* received its name because it was thought to exist as a solitary parasite in the bowel, but this is not correct as two or even more may occur. This form of *tenia* is not common in this country, being more frequently met with in Europe and Asia. When mature it is from 6 feet to 12 feet long, the head is small, round, not as large as the head of a pin and is provided with four sucking disks and a double row of hooklets, hence called in contradistinction to the other form of worm found in man, the armed tape worm. To the head succeeds a narrow threadlike neck, then follow the worm-segments or proglottides. In a 10 foot worm there may be as many as 800 of these proglottides each segment is hermaphroditic, and about the 450th from the head become mature and contain ripe ova. The worm attains its full length in from 3 to 3 1-2 months, after which time segments are continually shed and appear in the stools.

The history of the human tape-worm is briefly as follows: The eggs eaten by the hog are developed in its body into the larval worm or scolex, called at this stage the cysticercus cellulosa, the pork afflicted with these elements being known as "measely pork." The head with its suckers is found and the body becomes flask shaped. The cysticercus thus bury themselves in the flesh of the hog and are transferred living, in uncooked meat to the alimentary canal of man. The body now elongates and new joints arise behind the head until the form of the mature tape worm is attained. The under joints become filled with eggs, break from the parent worm and escape

from the intestine of their human host. Sooner or later these ripe eggs gain entrance to the alimentary canal of the unclean animal, the hog, and the cycle of generations begins anew.

2) *Taenia Saginata* Mediocanellata.

This the unarmed or beef tape worm, bears a close resemblance to the *Taenia Solium*, but it is generally longer and its segments or proglottides are more numerous and of greater length. It is decidedly the common tape worm of this country. Of scores of specimens examined by Osler almost all were of this variety. It may attain a length of 15 to 24 feet or more; the head is three times the size of that of the *Taenia Solium*, is square shaped, with four large sucking disks, but there are no hooklets. In the larval form the worm infests the flesh of the ox and calf, and is therefore more apt to be developed in persons who have eaten imperfectly cooked beef or veal.

3) *Taenia Echinococcus*.—The mature worm is rarely longer than 1-4 inch and consists of 3 or 4 segments. In the larval form it constitutes the hydatid which occurs in the human subject, especially in the liver. The history of the hydatid is as follows: Diseased offal is thrown to the dog. The animal passes by the bowel, either in the stream or on the field, segments of the developed worm. These segments are swallowed by sheep or cattle. Eventually the animal by which these segments have been swallowed become the food of man, and then the larval worm becomes developed into a bladder-like cyst, a hydatid.

4) *Brothiocephalus Lotus*.—This is the largest of the tape worms which infect the human subject. It is very rarely met with in this country, being common in Russia and Poland.

II. Nematodo (round worms).—These possess a mouth and alimentary canal. The majority are parasitic only during a part of their existence and they are unisexual.

1) *Ascaris Lumbricoidea*.—Ordinary round worm—This parasite varies in length from 6 to 16 inches, and closely resembles the ordinary earthworm in appearance. The fecundity of this entozoon is remarkable as the body

of the mature female has been calculated to contain sixty-four millions of eggs. *The ova probably find their way into the alimentary canal by unripe fruit, vegetables or impure water.*

2) *Oxyuris Vermicularis*, or thread worm.—This worm it is supposed is admitted into the intestine in the embryonic state by eating uncooked and unripe fruit, but water is a more probable vehicle. As these worms exist in large numbers in the rectum and about the anus they often give rise to considerable reflex disturbance by their local irritation.

3) *Tricephalous Dispar*, or long thread worm.—This variety inhabits chiefly the *cecum and colon*, but are very rare in this country.

4) *Ascaris Mystax*.—These are found occasionally in the human subject, but chiefly occur in the cat.

5) *Eustrongylus Gigas*.—This is the largest known round worm. It is 3 1-2 feet long, is rare in the human subject but occurs in the intestine or some times the kidney of such animals as live on fish, i. e., the dog.

PROCEEDINGS OF THE WINNIPEG MEDICAL ASSOCIATION.

The fourth regular meeting of the Winnipeg Medical Society was held in the Pathological Laboratory on Friday evening, Mar. 4th, at 8.30 p. m. The President, Dr. Chown in the chair. Present, Drs. Popham, Pennefather, Webster, Orton, Neilson, Todd, Parc, Bell, Good, Hutton, MacArthur, Inglis, Ponton and Smith.

The following motion of the Council of the College of P. and S. "That the Legislative Committee be hereby authorized to secure the necessary amendments to the Medical Act, so as to empower the Council of the College of Physicians and Surgeons of Manitoba to establish and maintain a medical library, and that the committee be instructed to confer with any committee of the Winnipeg Medical Society authorized to meet them, and ascertain the probable cost of establishing and maintaining such a library, and further that this Council at present express the opinion that not

more than five hundred dollars, (\$500) should be offered by it as an expenditure for first cost, and not more than two hundred and fifty dollars (\$250) should be offered by it as an annual charge for maintenance." gave rise to considerable discussion, and the sense of the meeting was strongly in favor of the early establishment of the library.

The following motion moved by Dr. MacArthur, seconded by Dr. Good, "That this society agrees to subscribe annually two hundred and fifty dollars (\$250) towards the maintenance of the proposed library and rooms," was passed unanimously.

The following committee was appointed to meet the Legislative Committee of the Council, Drs. Chown, Pennefather, Good, Popham and Smith.

The following were appointed a Committee on Legislation: Drs. Chown, Good, Orton, Todd and Smith.

Dr. Todd exhibited an aorta obtained in the dissecting room, showing unusual abnormalities in the arrangement of the arterial trunks leading therefrom, and gave an interesting outline of the development of the aorta, from the comparative point of view. A specimen of the commencing hydatiform degeneration of the chorion villi, was presented by D. Popham, illustrative of his paper on hydatiform degeneration.

Dr. M. S. Inglis, the City Health Officer, then gave a short address on preventative medicine in connection with the work of the Provincial Laboratory. He pointed out that the procedure of insisting on a time limit in the quarantine of diphtheria cases had now been abolished and instead a swab culture was inoculated from the throat of the patient, and as soon as this showed an absence of the Klebs-Löffler Baccillus all restrictions were removed. This had resulted in a shortening of the average period of quarantine, although in exceptional cases it might prolong it. Mention was made of the assistance the Laboratory would prove in tracing the origin of such diseases as Typhoid fever by a Bacteriological examination of a suspected water supply, etc., also in Tuberculosis, where an examination of

the milk or meat supply might furnish a clue to the source of the disease in connection with the Laboratory he expressed the hope that the time was not far distant when, aided by experience gained by constant practice in Bacteriological examination of diphtheria cases, would in addition to confirming the diagnosis, also enable the observer to give a very accurate prognosis of the course which any given case might be expected to take.

Another line along which the Laboratory would prove useful would be in the disinfection of houses. Dr. Inglis said that he felt that a great deal of the lack of confidence the Medical Profession had shown in health work in the past had been due to a feeling which he himself shared, that the disinfection of houses where contagious diseases had existed, was not by any means a satisfactory procedure. He outlined the attempts he had made in the past to do something towards the improvement of this service, and expressed the hope that one of the results of his recent visit to the East would be the establishment by the Dominion Government of a steam disinfecting chamber with a separate apparatus for the use of Formaldehyde gas attached. He had also requested the City Council to furnish his department with a Trillat Autoclave so that Formaldehyde gas might be used under pressure in affected houses. When these improvements were available he intended introducing prior to the disinfection, tubes containing cultures of nonpathogenic germs into the infected rooms, after the disinfecting process was finished these tubes would be returned to the Laboratory, where if it was found the cultures had not been destroyed, the process of fumigation would be repeated.

Dr. Inglis concluded his remarks by outlining a grand future for preventative medicine and in this connection mentioned some tests which are now being made in Western laboratories for conferring immunity from typhoid fever by means of vaccination, of susceptible persons exposed to the infection. The test of the immunity conferred being the reaction of the blood of the per-

son inoculated by Widal's test.

Dr. McArthur inquired if any improvement had been made in the methods of determining the length of time a scarlet fever patient retained infection.

Dr. Inglis replied that this was one of the points which still remained in doubt and that the only safe course was to insist upon a prolonged time limit during which the patient must be regarded as infectious and therefore quarantined.

Dr. Hutton inquired regarding the status of Formaldehyde gas as a disinfectant agent.

Dr. Inglis replied that considerable difference of opinion still existed amongst sanitarians regarding the power of Formaline to penetrate, but that all were agreed that it was a good surface disinfectant. It had also been proved that if used under pressure and in the form of dry gas it could be made to penetrate thoroughly. A prolonged exposure was, however, necessary, goods requiring to be subjected to the fumes for from twelve to twenty-four hours to disinfect them. It was for this reason he had recommended the City Council to purchase a Trillat Autoclave which he believed was the best apparatus manufactured for generating the dry gas. Dr. Inglis explained that this procedure was still in the experimental stage and he had only made mention of it as one of the possibilities which preventative medicine held out for the near future.

Sympathetic inflammation and irritation formed the text of an admirable discourse by Dr. Good, illustrated by an eye recently removed, in which sympathetic disturbance had resulted from a penetrating wound in the ciliary region, producing dislocation with opacification of the lens, and irido-cyclitis. Particular stress was laid on the importance of early diagnosis, and prompt treatment of sympathetic affections of the eye.

Intestinal parasites was the subject of an exhaustive and interesting paper by Dr. Parr.

In connection with a practical demonstration of the efficacy of Widal's

al's test, Mr. Ponton said:

WIDAL'S TEST AS MODIFIED BY WYATT JOHNSON.

Widal of Paris discovered that blood from a Typhoid patient had the power of paralyzing the bacillus of Typhoid fever in pure culture. The technique of the test is as follows: A drop of blood is collected on glazed paper or on a clean sterile glass slide. To this is added 2 or 3 loop-fulls of distilled water. This diluted serum is placed on a cover glass and to it is added a spoonfull of broth culture of Typhoid bacillus, preferably 12 to 24 hours old, from an old Agar culture. This is over a chamber in a glass slide, which is made straight by a ring of vaseline.

Under the microscope the bacilli are seen in active motion. If the reaction be positive, they gradually lose their mobility and in about 20 minutes are seen to be clumped. The reaction is not said to be positive unless the bacilli be absolutely motionless. The test is diagnostic in 90 per cent of cases.

A modification of this test, making use of a dead culture is very useful in country districts. This is still in the experimental stage.

SELECTED ARTICLES.

TRANSIENT HEART MURMURS.

The Journal of the Amer. Med. Assn., discussing this subject editorially, says:

The Lancet in its issue of Nov. 13, 1897 summarizes an annual address to the Northwest London Clinical Society delivered in October, by Sir William Broadbent. The main points dwelt upon are irritable heart and transient murmurs heard over various cardiac and pulmonary areas, with the differentiation of these functional and temporary conditions from organic and permanent disease. Candidates for the public service have sometimes it is stated, been refused their commissions on wholly inadequate grounds. According to Sir William the candidate presents himself for examination in a state of extreme

nervous excitement, his pulse rapid, perhaps irregular, and his cardiac impulse violent and even diffused beyond the right sternal border. Murmurs which sometimes cause rejection simulate closely a soft systolic mitral, but are heard only during inspiration or when the chest is full, and are due to compression of the overlapping lung by the heart during systole. Pulmonary murmurs may depend on bulging of the conus arteriosus against the chest wall; they disappear when the lung is interposed on deep inspiration. Sometimes bruits are heard, not only in the course of the ordinary mitral regurgitation, but over the greater part of the lung. In such cases there is usually pleural adhesion. The criterion of pseudo-mitral disease is absence of displacement of the apex beat and of accentuation of the pulmonary second sound or undue right ventricular impulse, together with absence of symptoms.

Medical examining boards in the United States have already met with experiences of this kind, which should lead to caution lest injustice be done. A board convened at West Point, N. Y., August 20, 1884, reported ten cadets as having become affected with heart disease while at the Military Academy and as being physically disqualified for service, but recommended continuance at the Academy for a probationary period of six months. They were kept under special medical observation in accordance with the directions of Surgeon General Sternberg, and the report of the medical officer who carried out these instructions, rendered June 23, 1897, when the last of the cadets concerned had become commissioned officers, showed that in nine the heart was free from structural lesion and that there was no symptom of mechanical derangement of the circulation nor of heart strain. In the one case in which the bruit persisted a medical board considered the condition not incompatible with the exigencies of the military service. The conclusion was reached that in all except the last mentioned case the murmur heard in each individual at the time of the examination in 1884 was due to a temporary irritability of the heart

caused by the nervous excitement attending the ordeal of examination." One of these young men, while the subject of medical observation became notable in the athletic events of the Academy, and in March 1897, was awarded the prize for all-round athletics, having won the greatest number of prizes in the individual contests.

These cases convey their own moral.

Twenty-five years ago the Editor of the Journal examined a young carpenter for a Life Insurance Company and was about to reject him, as there was a distinct heart murmur, but he demanded another examination, and two days later when perfectly quiet the murmur had subsided so much as to be scarcely audible. At this writing the applicant entirely well and to all appearance bids fair to become a septuagenarian.—Dominion Medical Monthly.

ORTHOPAEDIC SURGERY.

(Under charge of E. G. Frisbie, M. D., Professor of Orthopaedic Surgery College of Physicians and Surgeons of San Francisco.)

Treatment of Curves of the Spine by Means of Suturing the Spinous Processes.—A Châpault (*L'Ann. Med. Mod.*, 1896, vii, 465.) The patient after having been chloroformed is placed upon the abdomen in three-quarters position, with his back facing the operator. An incision is now being made along the spinous processes which extend over the borders of the spinal curvature, above and below, by at least two or three vertebrae. Without touching the interspinal ligaments, the row of the spinous processes is laid freely bare, and the soft parts drawn out of the way. An attempt is now made to reduce the gibbus by having an assistant pull in the axillary region upward, and another make downward traction on the lower extremities. After reduction has been made, as well as it may, a silver wire, of thickness suitable to the case, is passed through the ligamentum spinale. The silver wire is cut off in such a manner that a piece of thread, twice as long as the incision, remains hanging on each side of the perforation. With these two silver wires suturing together of the spinal process is performed. For this purpose the two

wires are crossed, and each one is passed separately through the ligamentum interspinale, situated immediately below, then through each successive one, until it reaches below the lowest of the exposed spinal processes. The two wires are now firmly twisted on each other by rolling them together at their ends. It is of great importance to pass the wire through each interspace, exactly at the same height as the lower edge of the overlying spinous process, so that the upper portion of the spinal column can be stretched from this firm support and kept in extension; no new loop must be applied until the firmness of the preceding one has been established. After all of the exposed spinal processes have been joined in this way, the soft parts are drawn together without drainage, the bandage is applied, and the patient put to bed. In this very simple operation, which generally takes only one-quarter of an hour, two difficulties may occur: (1) An ankylosis between the upper and lower margin of two neighboring spinous processes, in which case it will become necessary to bore a hole between the two adherent processes. (2) There must be present, beside the kyphosis, slight lateral deviation. In this case, after the application of the sutures, one of the wires must be drawn up by the side of the spinal processes, on their convex side, made tense, firmly drawn upon, and fastened to the upper sling. In five to six days (in disease of the lumbar or dorsal region), or in ten days (in affections of the cervical region), the first bandage is changed and the sutures removed from the soft parts. Orthopaedic treatment must be pursued at the same time, and after the operation strict immobilization of the sutured spinal column should be practiced. This operation makes an important advance in the treatment of Pott's disease, but is indicated only by slight forms of gibbus, where the affection has a rapid development, and where the prominence can be more or less reduced. The procedure is contraindicated in cases of advanced deformity, where destruction of a great number of vertebrae has already occurred; the presence of a cold abscess or paralysis are not contraindications to the operation.—

5th selected Hydrocyanic Acid as an Antidote to Chloroform

In the *Lancet* for January 1st Mr. Frederick Hobday states that the idea of using hydrocyanic acid as an antidote to chloroform suggested itself to him when watching the different effects of the two drugs upon the respiratory tract when they were employed to produce death. He refers to fifteen cases in which the drug was successfully used in a college "canine clinic" after respiration had actually ceased. The results, he says, have certainly been in the highest degree satisfactory, so much so that when chloroform is given to animals the only antidotes ready for use in the Royal Veterinary College in London are hydrocyanic acid and liquor ammoniac fortis. As soon as breathing ceases or becomes dangerous, he continues, artificial respiration is resorted to and a full medicinal dose of Scheele's acid placed as rapidly as possible at the back of the throat. When respiration has begun again the ammonia vapor is applied carefully to the nostrils and in the majority of cases a safe termination is the result.

The author states that the method of artificial respiration preferred is that of laying the animal in a horizontal position on its right side and pressing the ribs in a short, sharp, jerky manner, for he is of the opinion that the heart sounds are stronger and less labored when the body is placed horizontally.

With regard to the method of administration, the best way to apply the drug, says Mr. Hobday, is undoubtedly that of depositing it on the back of the tongue by means of a graduated drop-tube.

Hypodermic injection does not seem to give such good and rapid results, and the direct forcing of the vapor up the nostrils by means of bellows is decidedly dangerous from the risk of administering an overdose. Full medicinal doses are necessary, as, when an animal is under chloroform, the effect of the acid is not visible quite so quickly as when no chloroform has been used. If an overdose is given, the judicious use of the anaesthetic vapor will combat and quiet the spasm of respiratory muscles until the excess of acid has had time to become eliminated from the system. The author states that on

several cases he had opportunities to test this before experience taught the exact dose. This latter averages, in the dog and cat, about one minim of Scheele's acid for every seven or eight pounds of the animal weight. The object must be to give just enough acid to produce the preliminary excitant effect upon the respiratory centre, and, of course, as with all antidotes, the sooner it is administered after dangerous symptoms has appeared the more likely is the result to be favorable.

Mr. Hobday is convinced that hydrocyanic acid stands foremost in the rank of agents that are likely to prove of value as an antidote.

Its use, he says, is attended with no more danger than that of strychnine—in fact, in the dog and cat with far less. Its rapidity of action is unquenchable, it is easily absorbed from any of the entrances of the body, and it has the advantage over ammonia that it does not irritate the tissues to which it is directly applied. Besides these things, not only has it an immediate effect in starting the respiratory mechanism, but when once this has begun the stimulating effect of the acid is maintained for twenty minutes or half an hour and keeps it going until the breathing resumes its normal aspect and the patient is out of danger. Mr. Hobday states that in many cases the subject will recover by the aid of artificial respiration alone, but he is perfectly convinced from tests applied to this point, and from an extensive experience of the results obtained with other antidotes before hydrocyanic acid was tried, that the use of the acid gives an enormously higher proportion of successes. When compared with hypodermic injections of strychnine, either, or saline solution, or the use of amyl nitrite or ammonia vapor, its effect is visibly much more rapid and powerful. Scheele's acid is of course more rapid and powerful in its action than the British Pharmacopoeia acid and acts best when given undiluted.

THE TREATMENT OF RHEUMATOID AND GOUTY AFFECTIONS.

(By E. C. Scholer, M. D., Ph. G., Chicago, Ill.)

Rheumatism may be divided for

convenience into the following classifications: 1. Acute Rheumatism or rheumatic fever. 2. Sub-acute rheumatism. 3. Muscular rheumatism. 4. Chronic rheumatism. In rheumatic fever the prodrome is very short, usually of a few days, commencing with an aching feeling in the larger joints, such as the shoulder, hip, elbow, knee, ankle or wrist, making locomotion very difficult or even impossible. The inflammation having a tendency to be of a flying character, first in one joint then in another, mostly the first symptom is fever, not so high in the start but becoming more so as the increase in the joint involvement develops. Pulse is rapid and intense, sweating follows, decidedly acid in reaction. Urine is usually scanty, high colored, acid reaction with decided sediment mostly of urates. Subacute rheumatism often follows the acute and will cause the patient much suffering, the symptoms continuing not so severe nor the fever quite so high. Cardiac complications often occur at this period.

Muscular rheumatism comes on very suddenly, often within a few hours, mostly without any fever at all and little or no swelling of the muscles.

The lumbar muscles cause pleurodynia.

The pectoral muscles, serratus, and the sterno mastoid muscles cause torticollis or stiff neck.

The temporal and masseter muscles becoming affected making mastication very painful. The abdominal muscles also occasionally become involved. This form of rheumatism is usually of short duration.

Chronic rheumatism is a chronic inflammation of the soft tissues of the joints; its prominent symptoms are stiffness, pain and often marked tenderness with enlargement, always much worse in cool and damp weather and better when dry and warm.

Gout or podagra being both an acute and chronic constitutional affection, is admitted in general that it is caused by an excess or increased accumulation of uric acid in the blood, causing arthritis, which is a distinctive sign, and is mostly inherited but is also acquired.

In the treatment of rheumatism and gout the following essential points must be observed:

1. The elimination of such morbid

secretions that cause the ailment.

2. Administration of a remedy to allay the pain and soothe the inflammation in order that the patient may get the necessary rest and sleep.

3. Care must be taken to stimulate the vital functions so as to prevent the excessive weakness that follows the effects of both these complaints, especially in gout two things are necessary, knowing its cause, first to give such medication as will pronounce the solution and elimination of uric acid and, secondly, to give the patient only such food as is productive of the minimum amount of uric acid. Colchicine certainly of late has gained its laurels as being of the greatest value, although the plant from which this alkaloid is derived has been for a long time a recognized remedy in the treatment of rheumatic and podagric conditions, as it possesses pronounced diuretic alternative and remarkable sedative action. It is certainly indicated when rapid wasting of tissue and prompt elimination of the products are required. It relieves the pain, diminishes the swelling and shortens the duration of an attack. There is no longer a doubt that this drug causes a marked increase of the elimination of both urea and the uric acid in the urine, and when these are intermingled in the blood causes a separation of the same from it, which is of great importance.

In the colchi sal we have a solution of colchicine in the natural salicylate of methyl, each capsule containing 1-4 of a milligramme of chemically pure colchicine in 20 centigrammes of salicylate of methyl. The natural salicylate of methyl obtained from *Betula lenta* (nat. ord. armoctacial) gives relief where other salicylates have failed, and it is absolutely free from danger, not having the irritating effect upon the digestive tract so common with other salicylates. For over a year I have been using the colchi sal capsules in the treatment of all rheumatoid and gouty conditions, and in no one instance has it been necessary to use any other medicine to aid in curing same.

In marked inflammatory conditions I gave one capsule every hour for three doses, then one every two hours until twenty capsules had been taken, after this the capsules were continued

one every four hours until a cure was effected. Especially in cases of marked inflammatory character it was almost beyond belief to note how quickly these capsules relieved and checked the inflammation which, to the patient was a great blessing to be relieved of such terrible suffering.

The following rules are essential: Rest in bed, if possible, or placed in a comfortable condition; patient should be dressed in flannel undergarments to encourage absorption or perspiration. Affected joints should be protected with flannel rollers or cotton batting. Elevation of extremities usually relieves somewhat. Regarding diet, same should be nourishing and at the same time easily digested. All kinds of fish, raw oysters, and raw clams, green and succulent vegetables, such as spinach, celery, salads, cresses, peas, summer cabbage, radishes and horse radish, milk puddings, acid fruits, old cheese, mineral waters, buttermilk, cocoashells, milk with lime juice. Care must be taken to avoid such foods as contain nitrogenous or albuminous principles, as these in complete combustion result in urea and in complete uric acid.

Alcoholic drinks are contra-indicated. Bowels should be kept open and the kidneys in good working order. With these two active ingredients, colchicine and methyl salicylate, we have a specific for the treatment of rheumatism and gout, and I am convinced that if our medical brethren will give same a thorough trial with proper dosage, that they will bear me out in the assertions made.

In the *LANCET* for November 27th, Mr. Owen F. Paget gives his experience with the employment of olive oil in a hundred cases of typhoid fever, which came under his observation during his residence in Fremantle, Western Australia. Many of the patients, he says, lived in tents and were unable to obtain fresh milk, yet in spite of these disadvantages the percentage of death was nil. This, he thinks, is very remarkable, seeing that among those who were removed to the hospital, where they were properly attended to and received suitable nourishment, the percentage was as high as twenty in 1896, and eleven

in 1897.

Mr. Owen attributes his success very largely to the use of salad oil. Nearly all typhoid-fever patients, he says, are suffering from constipation or diarrhoea when they first come under observation; during constipation the typhoid bacillus acquires its power of developing, and this constipation is followed by diarrhoea and a gradual solution of the faecal accumulations caused by the pouring of the mucus and other fluids from the intestine. These faecal solutions, being intensely irritating, help to inflame the already infected Peyer's patches and, in addition, give rise to violent peristalsis, preventing rest which is so important to inflamed regions. Added to this there is the enormous drain of fluid from the intestinal mucous surface. Now, the fluid poured out is, of course, to a certain extent, reabsorbed, but not before it is saturated with ptomaines; this necessarily causes violent constitutional disturbances in the patient such as high temperatures, cardiac paralysis, and intestinal paralysis with tympanites, exhaustion, delirium and insomnia (with its accompanying uses of depressing drugs), sapraemia, septicaemia, pyaemia, secondary infection of glands, abscesses in bones and death. The problem, says the author, resolves itself into treating an inflamed and possibly ulcerated surface, and the same laws hold good here as in any other part of the body—namely, rest and protection from irritating substances and collection of discharges. As a proviso it is necessary to remember that the patient must not starve.

Mr. Owen thinks, therefore, that salad oil only is needed to keep the ulcers at rest and to remove irritating substances. He gives it as an injection by the bowel, a large breakfast cupful (from a quarter of a pint to half a pint) being used for the first four or five days at intervals of from twelve to twenty-four hours. Its benefits he says, are distinct from the first, the temperature almost always falls 1 degree F., and the patient, instead of being irritable and restless, becomes calm and composed. After the fifth day it may be given every

second day, or left off entirely if the patient is having natural motions at least every twenty-four hours, and if the temperature is steadily falling, there is, however, a certain proportion of cases in which the patients do not respond to injections: nothing comes away and the bowel is apparently empty, but it is in these very cases that the accumulation is worst. Suddenly the temperature runs up and the patient is seriously ill. Now it is the very virulence of the accumulation which, paralyzing the gut, prevents its coming away. The remedy, says the author, is simple. Give salad oil by the mouth, a large breakfast cupful at a time; there is no need to be frightened, no harm will result, but the bowels will almost certainly respond, and injections are now able to manage the rest. If the first dose is without effect, repeat after twelve hours.

Salad oil in typhoid fever, as he thinks, a perfect boon to the general practitioner. He can leave his patient, fearing neither high temperature, delirium, insomnia, heart failure, nor tympanites. He states that he has never used the wet pack or other appliances for lowering the temperature (except sponging with vinegar and lukewarm water) and that he has never used any of the vaunted intestinal antiseptics, never having had a high temperature or other complications, which did not respond to salad oil, except in two cases. The first was that of a boy with hæmorrhage, whose father and mother were always drunk and neglected him disgracefully. The second was a case of mitral stenosis which came under his care in a late stage of the disease. The patients in both cases ultimately recovered.

The author states that there seems to be no danger in conscientiously palpating and percussing the abdomen during the first week of the disease: he thinks it is a valuable aid in estimating the disappearance of accumulations, although at present, he says, the temperature and general well-being of the patient are his usual guides.

Mr. Owen adds that salad oil, a pint by the mouth and half a pint per rectum, has given him the most grati-

fyng results in two cases of typhilitis.
—N. Y. Med. Jour.

EDITORIAL.

This number will complete the 12th issue of the fifth volume of the Manitoba and Northwest Lancet. We are not able to look with entire satisfaction on the past twelve months though perhaps under all circumstances there has not been much to complain of. We have not been very successful in inducing practitioners throughout the large area in which the Lancet circulates to make use of its columns for recording the many interesting cases which from time to time must come under their notice. To our request to do so variety of excuses are given, the want of time one is of a very lame character. The most eminent men in our profession find time to write ponderous volumes, attend numerous meetings, of various scientific societies and in other ways to promote the interests of our profession, and this without neglecting their professional and private interests. Another excuse is that the man is a bad hand at detailing cases. This is an equally bad excuse. Every qualified physician and surgeon can write the actual symptoms which come under his observation and his treatment, it is possible that his readers may differ with the latter and suggest a different course. It is by this very divergence of opinion and the thought and consideration it promotes that that advance along the line of our profession is accomplished. "Audi alteram partem" is a golden maxim to follow and the practitioner who refrains from recording his experiences, fearing criticism is unjust to himself and not helpful to his fellows. We have many hospitals and public institutions between St. Paul and the Pacific Coast. There must be abundant interesting material which will be gladly received for publication in our columns and we hope that the 6th volume which commences in May will contain much from the pens of our profession west of St. Paul. Professional matters have received a more lively recogni-

tion in this city during the last six months and there is every prospect that this move is not destined to be of an ephemeral character. Let each of our members do what in him lays for the general good of our calling and the combined effort will prove of golden grain.

Whatever affects the community at large in the shape of legislation commends itself to the consideration of the medical profession, and the pros and cons of the proposed enactments now before the local legislature call for close attention. At the present time there are several raids contemplated on the liberty of the subject. Legislation is attempted to be carried out, that if passed would render unavailing all efforts to induce a desirable immigration to our Province: true, we may populate it, but with great expense, with the pauper families of the Eastern world but, whom we would have for years to carry before they became productive. Is that the class of immigrants that Manitoba and Northwestern Canada is now languishing for? Assuredly not. Capital for the development of our great resources is what we are sorely in need of, and the scum and paupers of Europe are the very last class of immigrants that our need calls for. It is not contended that we only want large capitalists, or millionaires, though we would warmly welcome them if they came, we want men and women, with sufficient capital to start the settler in life, free of debt, and with funds to carry him on until his labor becomes productive. How, if these contemplated enactments became law would this country be regarded by free men? Simply as a land lapsed into medieval tyranny, where the oppressive and multiple machinery of government was enslaving the people. What with a Lord's Day Act, a prohibition Act, a Curfew Act, and probably a few others in reserve. The Province of Manitoba, notwithstanding its advantages, and phenomenal fertility, would be the best shunned place on the face of the earth. On a summer's evening in Manitoba after the sweltering heat of the day, about 8 o'clock life becomes enjoyable, yet, that is the hour, that the poor children are to

be condemned to the close and oftentimes stifling atmosphere of ill-ventilated rooms, and this to gratify the whims of a few fossil minds. Taken alone in a hygienic point of view the proposition is an intolerable one. If those parties who are so anxious to see measures which the enlightenment of the world has shown to be mischievous and unnecessary, were to be asked if they favored class legislation, it is probable they would indignantly deny it. Yet the Curfew enactment would be class legislation pure and simple. Those in a pecuniary position to live in houses surrounded with lawns and gardens, would be unaffected by this law, but the laborer and the poor man living at the street side, without space in front or rear, where his children could breathe the refreshing evening air would be compelled to send them into the heated atmosphere of the small room or rooms of which this class of house is usually composed. This would mean disease and death to many a child, to be laid at the door of these unthinking agitators. Prohibition is another fad, a will o' wisp which they may pursue to the crack of doom—for no legislation ever could or can compass it. Temperance in all things is to be commended. Temperance in eating, in drinking, and we must not forget, in legislation also. But this attempt to coerce the majority at the hands of the minority can only meet with deserved defeat, and it will but engender discord and feelings of acrimony between hitherto friendly parties. No English word is more misapplied than is the word temperance. We are told "to be temperate in all things," and there can be little doubt that the great majority of the world's people would cordially support any reasonable legislation for the promotion of this doctrine, especially in the consumption of alcoholic liquors and narcotic drugs. But to attempt the total prohibition of their use is chimerical in this, the closing days of the 19th century, and were any government so unwise as to attempt its enforcement it could but result in a greater evil. A few words as to the proposed Lord's Day legislation. Is there a country in the world where the Sabbath is more decorously observed than it is in the Dominion of

Canada and of all parts of the Dominion most notably in the Province of Manitoba. If such laws as these are enforced on the dwellers in the cities and towns of Manitoba by the representatives of entirely rural constituencies, grave discontent will certainly follow, and as regards a Lord's Day Act the seventh day now by 99 people out of a hundred, kept as a day of rest would by meddlesome legislation become an irksome and unpleasant recurrence. We must hope that the good sense of the majority of the members of the local legislature will prevent their falling into the pitfalls which unwise people are digging for them.

Passing by the premises on Princess street few know the extent of the industry carried on within its walls. The Royal Crown Soap is an household article well known, but it is not equally well known that the various soaps used for either ablutionary or specific purposes, Pine Tar, Carbolic, Siphur, Ladies' Hand Soap, Otto Rose and Turkish Bouquet, exquisite preparations are all manufactured by this enterprising firm and all of them of the very first quality; with the latest and improved machinery, the use of only the finest qualities of oils, essences, etc., etc., the preparations of the Royal Crown Soap Works must soon take a very prominent place. Printing, box-making, in wood and card board, in fact everything with the exception of paper, required for directing, wrapping and boxing the goods is made on the premises by the employees, numbering, male and female, some fifty people. The machinery is an interesting sight of itself and the courteous proprietors are most willing to show people over the works, which will prove a revelation to many. There need be no fear in the minds of the most fastidious of unpleasant odors in connection with the manufacture, the fragrant essences used permeate the building, which is splendidly lighted and ventilated by numerous large windows. This industry deserves the warmest support at the hands of the public.

But a brief time has elapsed since

the visitor to Winnipeg was shown the two great sights of the Prairie City, with a certain grim humor he was at first driven to Stony Mountain Penitentiary, not so much to see a well conducted prison, as to partake of the boundless hospitality of the warden who did the honors for the Province, but who has since passed to the great beyond. Then to Sir Donald A. Smith, Lord Strathcona's Silver Height residence and herd of Buffalo, now things of the past. At present our macadamized and asphalted streets and suburban residences are shown with pride to our several visitors deservedly and duly admired. But the several industries carried on unostentatiously in the city would be a revelation to many and a tangible evidence of the enterprise of our citizens, and a forecast of the hive of industry that Winnipeg will shortly develop. If, instead of begging an unwilling government to develop our resources let us do the work ourselves, even though, it may require a large, may, even lavish expenditure. The utilization of our water power alone would in a few years recoup the city for all its expenditure. The East will sit on the West so long as it can, and he who believes otherwise is but a dreamer of dreams.

Dr. D. E. Strevall, the Iowa delegate to Manitoba, from the United States of America, says: "I think this Manitoba is a great country for those suffering from throat and lung troubles. I do not feel it much colder than Iowa, March 1st, 1898, and am feeling much better than when I left there."—Immigration into Manitoba and the Territories for the first week in April, 1898 averaged one hundred and fifty a day.

MISCELLANEOUS

Dr. Popham's name was inadvertently omitted at the heading of his original article on Cystic Degeneration of the Chorion VIII.

LIQUID PRESERVATIVE FOR MILK, BUTTER, ETC.

Formaldehyde suitably diluted is by far the best general preservative for foods, and is most probably harmless. The powders used for this purpose are generally nothing but boric acid, or sometimes a mixture of boric acid and borax with salt added.—Phar. Jour.

SANMETTO THE STANDARD PRE- PARATION FOR GENITO-UR- INARY DISEASES.

For some years I have been a very warm admirer of Sanmetto, and have found its action marked and well defined in the cases wherein I have used it. In cases of prostratitis, with loss of virile power in elderly men I find its action superb. In chronic specific urethritis, cystitis and all irritable conditions of the urinary tract I find Sanmetto very efficacious. I do not hesitate to recommend it as a standard preparation in cases where the action of pure santal and saw-palmetto is indicated.

JOS. MARSHALL M. D.

Durand, Mich.

THE SALT HABIT.

The use of salt as a condiment is so general and so universally believed in as necessary, that we rarely hear a word against its excessive use, but there is multitude of persons who eat far too much salt—eat it on everything, on meat, fish, potatoes, melons, in butter, on tomatoes, turnips and squash, in bread and on a host of foods too numerous to mention. To so great an extent is it used that no food is relished which has not a salty taste, and this hides more or less the real taste, which is often very delicate. Now, the amount of salt required in the system is comparatively small, and if the diet has been rightly compounded very little is necessary.

Some go so far as to discard its use altogether but whether this is wise or not we will not here consider. What are some of the evils of the excessive use of salt? The effect is to paralyze the nerves of taste, or pervert them so they cannot enjoy a thing which has not a salty flavor, and in addition there is a

direct tax on both the skin and the kidneys in removing it from the blood. Whether the skin is harmed by this tax we do not know. Possibly it is not greatly injured, yet we know that few people possess a healthy skin; but it is now pretty well settled that an excessive use of salt does overtax the kidneys in its removal and that cases of derangement and disease of these organs is due to this use. It takes only a little time to learn to enjoy many kinds of food without salt, and we advise our readers and others to look into this matter and to try and diminish the excessive use of this condiment. We believe they will be better for it.—Clinic.

CHEWING GUM AND DIGESTION.

The constant titillation of the salivary organs kept up by chewing this stuff not only causes a steady drain of saliva, which is most wasteful, but, what is more serious still, in consequence of the frequently repeated stimulation to which these organs are thus exposed, they fail to respond to the normal excitation which ought to rouse them to action when food is taken. A constant dribble of salivary secretion is substituted for the healthy flow which should occur only at meal-times. The glands fail to respond to any stimulant less potent than the peppermint, aniseed, or other constituents found in chewing-gum; and the more insipid foods, such as bread and other starchy compounds, pass into stomach unchanged. This is disturbing to digestion at its very commencement, and it is extremely probable that the indigestion for starchy substances, which is so commonly met with at the present day, is largely due to the waste of saliva caused by smoking and by the constant chewing of various substances, which is going on all around. The chewing of gum is thus not only a nasty habit, but is provocative of ill-health. Unfortunately when "chewing-gum" is sold in the form of a sweetmeat it may cause still more serious consequences, being apt to be swallowed by children, who, like their first parents, when they see that it is apparently good for food and pleasant to the eyes, are undeterred by the superscription "not to be eaten."

Compression of the Nerves to Relieve Whooping-Cough.—A. de Miranda announces in the *Semaine Med.* of October 20th, that compressing the vagus at the neck checks the vomiting in this disease, and that compression of the superior laryngeal rapidly calms the paroxysm of coughing. The family can be easily instructed how to perform the compression. In the early stages of the affection the bronchi are full of mucus and the cough must be allowed its course, but later the compression will be found practicable and effective. He also reports the cure of one case of uncontrollable vomiting in pregnancy by compression of the cervical portion of the pneumogastric.—*Périoscope de Med. Prog.*

Tellurate of sodium ten to twenty centigrams and alcohol, fifty grams, makes a solution of which a teaspoonful may be given in sweetened water morning and night in the night sweats of phthisis. Dr. Jôguet says it was successful in sixteen out of twenty cases.—*Lyon Med.*

DANGER IN TEA.

The manner in which the tea-habit has increased is alarming; it is fast becoming universal. It almost seems that soon only those already addicted to some other form of intemperance will form the abstemious class. Tea is drunk at all hours, with food and without, and is taken hot and cold. There is some excuse for the popularity of the hot infusion. In common with other hot beverages it is very acceptable as a stomachic and general stimulant, but it is the heat and not the infusion that stimulates. A cup of hot bouillon will always prove as agreeable and more nourishing and stimulating. No excuse can be found for the senseless habit of drinking the usually harmful iced tea. It is simply an expression of the natural perversity of human nature when given up to a pernicious habit: unsatisfied with the excess in its ordinary form, some new means, without reason or advantage, are devised for its more elaborate practice. In warm weather many other cold beverages are better.

Unless excessively sweetened, lemonade, orangeade, etc., are vastly

more palatable and certainly harmless. Another folly of tea-drinker is dilution of the infusion with milk, and further perversion with sugar. The ill effects of tea-drinking are sufficiently plentiful without the addition of the large amount of sugar taken daily, cup by cup, by a tea devotee, in itself quite sufficient to cause obstinate gastric derangements and their manifold complications.

The deleterious effects of tea are in some degree due to the alkaloids, which, when taken in constant or excessive doses produce insomnia, restlessness, mental depression and general nervous derangement. Occasional small doses act as cerebral stimulants; poisonous doses may produce great prostration and death. However, the greatest injury of tea-drinking is due to the astringent action of the tannin ingested; what may be called a tanning of the sensitive mucous membrane and its contained glands along the whole gastric intestinal tract is gradually effected.

This leads to a loss of sensibility to food stimuli, imperfect secretion of the digestive elements and insufficiency of intestinal movements, resulting at first in flatulence and chronic constipation and ultimately in obstinate indigestion and its associate and consequent evils. It is true that occasionally a cup of hot tea does stimulate digestion, but it is the heat not the alkaloid.—*Jour. Med. Assoc.*

ANCIENT REMEDIES.

Most of the drugs on which we chiefly rely date very far back. Nearly all those most commonly in use were known thousands of years ago. Cassia and rhubarb were described by old Arabians, ergot was used in parturition by the peasants of Germany hundreds of years ago, male fern in tapeworm by the early Greeks and Romans. Mercury was a specific from time immemorial, and the list can be lengthened. The most ancient pharmacopoeia known was found between the legs of a mummy about 1500 B. C., and the principles of modern treatment were practiced by Asclepiades of Brussa.

The Growing Development of Practical Medicine

IN HAEMATHTRAPY, OR BLOOD TREATMENT.

BLOOD, AND BLOOD ALONE, is physiologically ascertained to be the essential and fundamental Principle of Healing, of Defense, and of Repair, in the human system; and this Principle is now proved, by constant clinical experience to be practically available to the system in all cases, to any extent, and whenever needed, internally or externally.

And the same overwhelming clinical demonstrations have also proved that the vitality and power of Bovine Blood can be and are *PRESERVED*, unimpaired, in a portable and durable preparation sold by all druggists, and known as *Bovinine*. Microscopic examination of a film of Bovinine will show the *LIVING BLOOD CORPUSCLES* filling the field, in all their integrity, fullness, and energy; ready for direct transfusion into the system by any and every mode of access known to medical and surgical practice; alimentary, rectal, hypodermical, or topical.

In short, it is now an established fact, that if Nature fails to *make* good blood, *we can introduce it*. Nothing of disease, so far, has seemed to stand before it.

Apart from private considerations, these facts are too momentous to mankind, and now too well established to allow any further reserve or hesitation in asserting them to the fullest extent.

We have already duly waited, for three years; allowing professional experimentation to go on, far and near, through the disinterested enthusiasm which the subject had awakened in a number of able physicians and surgeons, and these duly reinforced by others, through correspondence, and by comparison and accumulation of their experiences in a single medical medium adopted for that provisional purpose.

It is now laid upon the conscience of every physician, surgeon, and medical instructor, to ascertain for himself whether these things are so; and if so to develop, practise and propagate the great medical evangel, without reserve. They may use our Bovinine for their investigations, if they cannot do better, and we will cheerfully afford every assistance, through samples, together with a profusion of authentic clinical precedents, given in detail, for their instruction in the philosophy, methods and technique of the New Treatment of all kinds of disease by Bovine Blood, so far as now or hereafter developed.

Among the formidable diseases overcome by the Blood Treatment, in cases hitherto desperate of cure, may be mentioned: Advanced Consumption; Typhoid Fever; Pernicious Anæmia; Cholera Infantum, Inanition, etc.; Hemorrhagic Collapse; Ulcers of many years standing, all kinds; Abscesses; Fistulæ; Gangrene; Gonorrhœa, etc.; Blood-Poisoning; Crushed or Decayed Bones; Mangled Flesh, and great Burns, with Skin Propagation from 'points' of skin; etc., etc.

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