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CERTAIN FORMS OF CLUB FOOT.

By WM. H. HINGSTON, M.D., L.R.C.S. EDIN.,
Surgeon to Hotel Dieu Hospital.

Professor of Clinical Surgery Montreal School of Medicine.
(Read before the Medico-Chirurgical Society, January 25.)

It is precisely one hundred years since, as Adams says, the treatment of club foot was limited to mechanical appliances, when Thilenius proposed the division of the tendo-achillis by an open wound; sixty-eight years since the division of the same tendon subcutaneously was performed—if Delpech's operation deserves to be so designated; and fifty-three years since Stromeier improved upon the operation of Delpech by puncture and subcutaneous division. The modification of the operation of Thilenius, so far, concerned the manner of dealing with the tendo-achillis, for to that tendon alone was imputed all the blame of the deformity; until comparatively recently, when other structures,—tendinous, muscular, ligamentous, bony, have received attention.

I intend here to speak only of that inveterate form of club foot; not of that simple form with which all are familiar, and which the nurse's and, later, the mother's hand alone may remedy; nor of that other form which mechanical appliances may easily correct; nor of the milder form which tenotomy alone will cure; nor of a still severer form in which tenotomy of certain tendons, aided by mechanical appliances, suffice to remedy; but of that still severer form in which division of all the tendons and fascia commonly, or exceptionally at fault; followed by the use of the best

mechanical contrivances, are powerless to remedy. One such case I exhibited to you last year, in the person of Emelie Boileau, aged 15 years, upon whom I had operated in the early part of 1881 for exaggerated talipes equino varus.

It may be in the recollection of some of you, that, when I showed to this Society the young girl in question upon whom I had performed the operation which had been introduced to the profession by Dr. Phelps, of Chateauguay, N.Y., based on the principle enunciated by Dr. Post of New York in dealing with wry neck, I mentioned that I had already, with the tenotome, divided, without much amelioration of the deformity, all the muscles usually at fault in this affection. There remained, to undo the excessive arch and shortening and doubling-in of the foot, excision of a portion of the tarsal bones; but the additional shortening of the foot that would result, not to speak of the considerable risk to limb and life of opening into the inter-tarsal articulations, made me disinclined to resort to it. You saw the result of the operation in a completely straightened foot, without any diminution, but with increase of its length, and with but temporary impairment of its strength. The operation, so far as the members of this Society knew, was a novel one, and one not without the apparent qualification of rashness.

I shall give short notes of a second, third and fourth, and two photographs of the last.

J. McG., æt. 19 years, the subject of exaggerated talipes equino varus entered the Hotel Dieu on 12th February, 1883.

He had been born with the deformity, but, as years rolled on, the deformity became greater.

The heel was drawn up; the foot very strongly inverted, and bent inward upon itself. The patient walked on the outside of his foot; and the usual cutaneous and tarsal thickness existed there. I could not undo, in the slightest, this exaggerated deformity. I divided subcutaneously the plantar fascia, tibialis posticus, and anticus, and the flexor pollicis and long flexor digitorum, and, lastly, *as is usual with me*, the tendo-achillis. With the exception of bringing down the heel, the deformity, notwithstanding considerable force, was not relieved—the excessive arch remaining as before. I then adopted free open incision; swept the knife across the sole of the foot, dividing tissue after tissue till the bones were reached.

The excessive arch was then in great measure, but not completely, remedied. Across the ball of the foot a padded splint was applied, and on this adhesive plaster to which were attached cords which led over pulleys, and a weight of 12 lbs was suspended. With the exception of looking after the footpiece, and sliding it nearer to, or farther from, the open wound, no surveillance was needed. The dressing consisted of vaseline for the first two days, and afterwards carbolic lotion and red wash, as suppuration was more or less abundant. When the patient left the hospital, on 30th April, his foot was quite straight and supported his weight comfortably. I have since learned that the foot is in every respect like the other.

CASE III.—Is that of a boy, J. D., aged 10 years, who entered the Hotel Dieu under my care on 15th October, 1883, for double congenital talipes equino varus. The deformity in both feet, but chiefly in the left, was excessive, and no amount of force, even under chloroform, could diminish it. Subcutaneous division of the supposed faulty tendons of the left foot was performed, and in the order named in previous case; but, apart from giving greater freedom to the heel on the division of the tendo-achillis, the rigidity and deformity remained. I then used the scalpel very freely to the sole of the foot, dividing all the tissues down to the bone, and gradually unfolded the excessive arch. This added most markedly to the length of the foot,—the cut edges at their centre gaping apart to the extent of nearly two inches. I had difficulty in keeping up extension. The boy was a mischievous fellow, difficult to control. Pulleys were ineffectual, as they were tampered with either by himself or some other patient. But what was found to restrain him effectually was a quickly-set-

ting plaster-Paris splint, with a fenestra opposite to the incision. Through this the gaping wound was filled with tow soaked in Peruvian Balsam and re-



newed once a day. Granulation went on with surprising rapidity to the end. (I may here say, by way of parenthesis, that Peruvian Balsam, applied in this way, is without exception the best remedy with which I am acquainted, and fully merits the favor in which it is held by Sayre and others.)

CASE IV.—This subject was the same as the preceding, the foot this time being the right one. As the deformity was not so great as in the left I hoped, by free subcutaneous division, to remedy it in great measure; but the relief obtained by tenotomy was so inconsiderable that I proceeded at once to treat it as I had the left. The order of division was as in preceding case, with this difference, that structures already divided subcutaneously required no further attention by the open wound. The great difficulty in the treatment of the second foot, as in the first, was to keep up proper extension. Every additional day in the hospital added to the

boy's cunning and to his desire to display it, regardless of consequences, to the admiring patients around him. During my absence of a couple of days from the city the boy manipulated things as he wished, and on my return, finding the old state of deformity partially restored, I put him again under chloroform and forcibly extended the foot. This forcible tearing open of a partially healed wound, I may add, was followed by more suffering than was the original "operation."



In talipes equino varus, however exaggerated the degree, there is, there can be, no contraction of either the abductor or of the short flexor of the little toe. The plantar fascia is almost always at fault, and its division remedies to some extent the deformity. The division of the flexor brevis muscle still further relieves the tension; the separation of the flexor longus digitorum still further; division of the tendon of the flexor longus pollicis still more markedly; and that of the flexor accessorius still further.

The lumbricales, as they are on the phalangeal side of the incision, escape division—while division of the tendon of the tibialis posticus completes in a satisfactory manner the relief of the deformity, unless, as in Case I., the long calcaneo cuboid ligament, a much longer ligament than its name implies, be also partially severed.

The hemorrhage is not what might *a priori* be expected. The internal plantar artery, 'tis true, is divided; but the external plantar, much larger than the internal, escapes division, if the knife be not needlessly carried beyond, or in front of, the base of the fifth metatarsal bone.

Leaving the large external plantar untouched, its numerous distributing branches suffice to keep the muscles, and the digits and their appendages, abundantly supplied with blood. In no case was the temperature of the foot on the distal side of the incision lowered, and granulations sprang up as abundantly on that as on the central side.

The internal plantar nerve is divided early in the operation; and, if the incision be carried too far back, the external plantar suffers, also: but this would be unwarrantable. Respect for the arteries prevents our carrying the incision too far forward; and respect for the nerve too far backward.

A question will now obviously suggest itself: Why not divide all these muscular structures subcutaneously? And in the answer to which lies the gist of the whole question: the skin itself is largely at fault, and must be divided; and the division of the artery necessitates an open wound. In Case II. every muscle and tendon were divided down to the bone, but the relief was not what I expected till the unfolding process had gone on for several days after division.

In the third and fourth cases (those of the young boy) I was disheartened at the imp's devices with the aid of other patients in the ward to relieve his foot of restraint. The weight and pulley were not equal to him.

The quickly-setting plaster, to which a little salt had been added, applied under strong extension, suited admirably in one foot; and in the other a simple and inexpensive device suggested to me by Dr. Phelps, and which I now show to you, was used with satisfaction.

Most of you are familiar with the method of applying adhesive plaster around the foot, and along the outer side of the leg; but in this plan the plaster so applied is divided between its two attachments on foot and leg, and two pieces of

thick wire like telegraph wire or two buckles are attached, and these are drawn together with cord and tightened as the plaster loosens. This device is a simple, inexpensive and efficient one, and is much better than the single piece of adhesive plaster which, when it slips, becomes useless.

What is, 1st, the position of the operation; and what are, 2nd, the limits of its application? It is a most useful one, and one which, compared with excision of a wedge-shaped portion of the scaphoid—an operation which hitherto has not met with any considerable favor—is simple, safe, and requires no dexterity whatever in its performance.

What are the limits of its application? These appear to me clearly defined: 1st. Eliminate all cases in which, by hand or by mechanical appliances, or by both, deformity can be relieved.

2. Eliminate all cases which can be relieved by tenotomy.

3. Eliminate all cases where these, or any of these methods, or all combined, may suffice; for in all those cases would the operation by open division be totally unwarrantable.

But in those cases of exaggerated club foot, as in those now submitted, with excessive arching and shortening, and more especially with narrowing and rolling in of the foot upon itself, *which can not be relieved by the usual methods*, operation by open division offers important advantages.

RIVERSIDE, SAN BENARDINO COUNTY CALIFORNIA, AS A HEALTH RESORT.

By J. F. T. JENKINS, C.M., M.D., etc.

During a recent visit to Riverside, Southern California, I was very much impressed with its advantages as a resort for persons suffering with diseases of the respiratory organs and with the many delightful aspects of its climate and scenery.

Until within the last few years but little was known of this charming locality, and many mistaken ideas still prevail as to the conditions existing there. Public attention is now, however, being specially directed to this semi-tropic sanitarium as one of the most desirable on the Pacific Slope, both for health, pleasure and residence.

Riverside has one of the finest situations in the State, an elevation of nearly 1000 feet, and at all seasons of the year a mild, dry and bracing air. Its position is central, located on the California Southern, and distant about eight miles from the Southern Pacific railroad at Colton. It can thus

be reached in a few hours by rail from Los Angeles. The people are of a refined and highly intellectual class, and are chiefly engaged in fruit culture. Most of the present settlers left their Eastern homes to recruit their health in this invigorating atmosphere and, deriving benefit, have made it their permanent abode.

The strongest point of this climate is its evenness. It has much to gain by a careful study of its meteorology and comparison with the most favored of other sections. The following table speaks for itself. The mean average heat of July and the mean average cold of January is given as conveying a more correct idea than a comparison of temperature by taking the annual thermometric mean.

	Heat	Cold	Difference
Riverside, California	.70	51	19
Jacksonville, Florida	..83	55	28
San Antonio, Texas	...84	52	32
Atlanta, Georgia	.....79	46	33
Denver, Colorado	.....72	26	46
St. Paul, Minnesota	...72	15	57
Malta Island	.....78	56	22
Cairo, Egypt	.....85	58	27
Nice, France	.....75	45	30
Mentone, Italy	.....73	40	33

In glancing at this table it is seen that Riverside heads the list as being least troubled with extremes of heat and cold. This, coupled with the fact that it has much less rainfall than any of the places mentioned, is conclusive as to its right to be ranked among the first places claiming the attention of the medical profession.

Perhaps the most important point in connection with this locality is the fact that within a short distance almost all varieties of climate may be had. Invalids who need a colder climate can get it by going up into the mountains where the rarified air is laden with the odors of the balsamic fir and pine tree. As the mountains reach an altitude of from 8,000 to 11,000 feet all the advantages claimed for Colorado can be obtained here, and it is the facility with which invalids can reach elevated regions and at the same time remain within easy access to all the comforts and luxuries of city life that makes it a place of such importance as a health resort.

As a proof of the dryness of the atmosphere it may be mentioned that fresh meat remains in the open air for an indefinite length of time without

undergoing putrefactive changes. In fact, meat is cured at all seasons by merely slicing and hanging in the sun. In Autumn, grapes are made into raisins simply by exposure on shallow trays. Although the atmosphere is so dry it is never oppressive, and heat is much less severely felt, even with much higher temperature than in more humid localities.

It is estimated that consumption does not cause the death of more than four per cent. of the natives of this region. This was predicted by an able writer on climatology many years ago, and during the time that has elapsed results have to a great extent verified the truth of this prediction. In the whole State the total number of deaths from pulmonary affections is reported as less than ten per cent., of which a very large proportion are imported.

The climate of Riverside, without considering its many other attractions to the invalid, is sufficient to make it a place of great importance; and as these advantages become more widely known it will doubtless largely increase in population. It is situated in a fertile valley near the waters of the Santa Anna, from which it derives two parallel artificial rivers for irrigating its vineyards and fruit groves extending over eight thousand acres of land. By its nearness to the mountains and distance from the sea it enjoys the tonic and bracing tendency and much greater dryness of the higher levels, at the same time that it is freed from the moisture attendant upon the more direct breeze from the ocean. All tends to make it the *climatic desideratum*, as it is the crowning glory of this lovely land. The country around for several miles, including the beautiful colony of Arlington, is now contained within the corporate limits of this new city, and presents the idea of one vast garden with productions of almost every conceivable kind.

The home-like influence is complete, and the invalid has the advantage of congenial and cultured society, so there can be little loss of the home feeling so essential to the wavering in health or spirits. On every hand the surroundings are mountain, hill and dale. Splendid drives, along magnificent avenues, bordered with hedges of magnolia, eucalyptus, pepper, palm and cypress, extend in all directions through groves of the orange, lemon and lime. Valley and *mesa* are covered with trees, shrubs and flowers of tropical luxuriance. Such is the *locale* of the city, so rich

in natural charms and beautiful scenery that one can enjoy the healthier pleasures of the country with all the advantages of "life in town." Fortunate is he who can add the delights of such conditions with the environment of a centre of intellectual activity, social refinement and taste for the beautiful as exists in this matchless spot of the Golden State.

In this brief description it would be impossible to detail all of the many reasons for placing it in the front rank, *if not in the first place*, as compared with other American and foreign climates. It is in nearly the same parallel of latitude as Atlanta, Georgia, Palermo in Italy, Jerusalem, the Delta of the Nile, Shanghai, Seville and Gibraltar. Many tourists who have visited the leading health resorts of Europe declare that its skies excel those of Italy, Greece and Spain.

Snow never falls in the Riverside district, but it may be seen crowning the great mountain peaks, which glisten in white for many months together.

One of its principal advantages to the invalid is its perfection throughout all seasons. Those whose means will not allow of a semi-annual change must have some place where they can *remain*. They can enjoy but a few short months in the West Indies or Florida; even along the famous Riviera coast of the Mediterranean, at Mentone, Nice, Cannes, San Remo and Monaco, they only possess in part, from December to March, the conditions enjoyed at Riverside during the entire year.

Each season is so much alike, and passes so imperceptibly and gradually from one to the other that the change is hardly realized. It has a mild winter suited to the invalid, with a summer suited to the requirements of the native of any northern clime. The air is so clear that, with the naked eye, small objects may be seen many miles away. A noticeable feature is that moisture does not condense on plastered walls or on windows. The effects of this pure atmosphere must be experienced to be appreciated. Under its influence a delightful dreamy languor pervades the system. The western breeze is wafted o'er one's face with a soft, enchanting touch, and one fully realizes the pleasure of life in such a sunny, congenial semi-tropic land. With these soothing influences a new vigor is infused into the body, followed by a better appetite, refreshing slumber, and constantly increasing strength. A little color is seen returning to the faded cheek, hope is revived. Improvement, at first gradual, becomes more and more perceptible.

Hygienic medicines produce the desired effect, and the credit is properly given to the climate.

This section is doubly dowered, having the advantage of the two zones without the drawbacks of, either, this results from two causes: first, the protection afforded by the encircling mountain ranges which isolate it more or less from the rest of the country; second, the influence of the great ocean stream called the Kurosiwo, which, after sweeping around the islands of Alaska, strikes the coast of this portion of the State with a temperature never varying but slightly from 56°. Although Riverside is situated quite a distance inland this influence always keeps the atmosphere temperate. There is an almost constant breeze from the west. In fact, this breeze might be said to form the characteristic feature of the climate. It blows harder in summer than in winter, and with the temperature of the sea at from 54 to 58 it can be easily understood that the stronger the wind the warmer in winter and colder in summer. When the air becomes heated by the sun it rushes up the mountain sides in a steady current, and to fill the vacuum thus created in the valley below the ocean air (now dry) is drawn "in gentle zephyrs" through every opening in the surrounding hills.

The visitor to Riverside will find excellent hotels and good boarding houses. "The Glenwood," with a quarter of a mile of broad verandah, overlooking two and a half acres of orange trees, vines and flowers, is first-class in all its appointments. "The St. George" is also all that could be desired for comfort and convenience, and at very moderate rates. At either place carriage and saddle horses for hunting, camping or riding about for amusement may be obtained.

In conclusion, the writer may venture to state that of all the places he has visited, either in Europe or America, Riverside possesses beyond all comparison the greater number of elements which may be considered as essential to the formation of the ideal health resort. It has the charm of the most attractive spots in Switzerland. From the piazza of the hotel the lofty mountain tops of San Bernardino, San Jacinto and Greylock may be seen, just as Mont Blanc is viewed from Geneva and the Jungfrau from Interlaken. All who have sought this master-piece of a bountiful Creator, in quest of pleasure or health, agree in pronouncing it *par excellence* as the place most calculated to build up and strengthen the *morale* of the dejected in spirit or failing in health.

28 Richmond Square,
Montreal, March 1st, 1884.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, Jan. 25th, 1884.

T. A. RODGER, M.D., PRESIDENT, IN THE CHAIR.

Case of triple birth at 7th month of gestation, in two of the fetuses development had been arrested at about 4th month.—Dr. Beaumont Small, of Ottawa, sent down the above 4 months' fetuses along with the following history and remarks:—

The patient was a young woman of delicate health who had always been anæmic and troubled with menorrhagia. During the first four months of married life the prolonged menstrual periods continued without change. She then became pregnant, her general condition improved, but she persisted in performing heavy household duties. During the early months of pregnancy there is no history of any condition likely to cause injury to the contents of the uterus. During the last month before delivery there were marked signs of irritability of the uterus. Slight disturbances, such as driving over a rough road and jumping easily from a buggy, were followed by pains and distress much more severe than the causes would lead one to expect. About a week before delivery she fell upon her side, receiving a severe shock; active pains ensued and continued until delivery. I was not able to find out if the membranes had been ruptured at the time of the injury. Upon my arrival labor was well advanced, the os fully dilated and waters discharged. During examination a loose body was detected projecting from the os which I endeavored to recognize as an arm or leg. To my surprise it became loose and was easily withdrawn—proving to be foetus No. 1, in a black, shrivelled, flattened state, differing very little from its present appearance. The flattening was due to compression between the head and pelvic walls. No placenta was attached. In a short time a well-nourished but lifeless foetus of about seven months' development was delivered: it had been dead for a day or two only. The placenta followed easily, there was no sign of its being a double organ, or of any attachment of the other foetus. Shortly after foetus No. 3 was removed with its placenta attached. This placenta was elongated, and evidently foetus No. 1 had been joined to it. Convalescence progressed favorably,

and the patient regained her comparative good health. There is no instance of multiple births having occurred in her mother's family. The cause of this unusual condition, I think, can be traced to the impoverished physical condition of the patient. The burden proved too great for the enfeebled uterus—the single placenta proved the stronger and attracted the greater show of nutriment—the other was correspondingly weakened and ultimately destroyed. Such instances of the power of toleration possessed by the uterus are rare. At a recent meeting of the Obstetrical Society of London a similar condition was reported in a twin birth. One other member only had met with the same in his practice.

Dr. KENNEDY had never seen a similar case. He thought that pressure stopping the circulation was the cause of death of the specimens exhibited.

Dr. WM. H. HINGSTON read a paper on *Certain Forms of Club Foot*: This paper will be found among our original communications.

Dr. SHEPHERD said that Dr. Hingston ought to be congratulated on the results obtained in the cases just quoted, and spoke of the success which Dr. Davies has in these cases, where he operates by removing a wedge-shaped piece from the scaphoid bone.

Dr. HY. HOWARD asked Dr. Hingston if the wedge-shaped opening which fills with granulation tissue ever contracted later on, as he had seen operations on the eyelids which, after healing, were perfect, become a source of trouble from contraction of the granulation tissue months after. In one of these cases, that of a lad, it became necessary to perform a rhinoplastic operation. A bit of the check was transferred to the upper lid, and, later on, whisker hairs grew from this piece.

Dr. HINGSTON said that in the face this was so—the tissue would contract; but in the foot, which with each step was stretched, this would not occur. In the girl operated on two years ago there is no contraction.

Dr. WOOD exhibited two *Albinos*, and gave the following particulars:—Two boys, aged respectively 9 and 6, with congenital nystagmus, the elder having also right convergent strabismus. They are both albinotic—white hair, eyebrows, skin, and choroid; also pink irides. The eyes are very sensitive to light, and the children are both myopic. They are now, and have always been healthy. There is no other instance of albin-

ism in family or in any way of parental relatives. No parental consanguinity or chronic neurotic disease. Other children healthy; none dead. The children are perfectly intelligent, and the elder has learned to read, although he suffers from inability to bring about proper ocular fixation. The elder child has fair distant vision, though they both suffer from amblyopia. Excitement of any kind increases the oscillation of eyeballs. On examination by ordinary light, the interior of eye can readily be made out. The mother had nothing to say regarding prenatal impressions of any sort. There are four children in family, and these are second and third. Dr. WOOD said the question was, how should their eyes be treated?

Dr. KENNEDY thought colored glasses, by absorbing some light, would be useful.

Dr. HY. HOWARD had seen several similar cases. He used to treat them successfully by using ordinary colored glasses covered with chamois leather, leaving a slit-like opening in the middle of the leather.

Double Nipple.—Dr. CAMPBELL mentioned having lately seen a man with two nipples on his left side, and said that Dr. Howard of Lachine had recently seen a case of double nipple on each breast.

Dr. SMITH had seen a similar condition in a woman.

Traumatic Delirium.—Dr. HINGSTON mentioned that lately he had had an unusual complication follow several operations, viz., violent delirium, with high temperature, lasting four or five days, but never ending fatally. Some of those cases occurred in private practice, others in hospital, and all in temperate patients. He asked if any of the members had similar cases.

Dr. TRENHOLME said he had seen several cases of high temperature, accompanied with delirium, follow delivery at the Western Female Hospital.

Condolence.—The following resolutions of condolence were passed:—

Resolved.—That the members of this Society have heard with deep regret of the death of Dr. John Reddy of this city, which took place in Dublin on the 23rd January. The Medico-Chirurgical Society of Montreal feels that in the death of Dr. Reddy, one of its former Presidents, it has lost a member of the profession who, in his entire work, proved himself to be devoted to its best interests.

Resolved.—That this Society extends to the family of the deceased its deep sympathy in the bereavement which has befallen them.

WHAT THE ANCIENTS KNEW ABOUT
OBSTETRICS AND GYNECOLOGY.—
TRANSLATIONS FROM THE
LATIN EDITION OF ORIBAS-
SIUS OF THE 4TH AND
AETIUS OF THE 6TH
CENTURY.

By G. M. B. MAUGHS, M.D., Prof. of Obstetrics and Diseases of Women, Missouri Medical College; President of Obstetric and Gynecological Society, etc.

Through the kindness of Dr. Dickinson I have here a most rare work, perhaps the most valuable work in the world on medicine, and almost certainly the only copy that has ever been west of the Mississippi river, and as you will see it is a work that has been very little consulted even by the learned men of Europe. This book, a Latin translation of Oribasius and Aetius is three hundred years old, and is to many a revelation touching obstetrics and gynecology; it is evident that the medical writers of to-day have not read this work. For instance many have supposed that Récamier invented the speculum. It was known that a speculum had been in use, but it was supposed to be a very imperfect instrument. All supposed that James Y. Simpson was certainly the first to use sponge tents and uterine sounds but, as we shall see, sponge tents and uterine sounds, were in use centuries before. We all supposed that Amussat was the first to make an artificial vagina, but we will see that Archigenes, a distinguished gynecologist of the first century, made artificial vaginae also; so that we see there is nothing new under the sun. These persons were just as familiar with those things as we are. Obscurity occurs some times, and it is difficult to translate these things because they lacked terms to convey the idea. For instance, the term "vagina" does not occur in all these books, and when the vagina is intended they use *sinus pudendi*, which generally means vagina, but is sometimes used to mean the fissure between the labiæ. This difficulty arises from the lack of express terms. If Demosthenes were resurrected to-day, and possessed all the command of language for which he was celebrated, he could not find words to express the idea of telegraph and telegram, and yet these are Greek. Now this difficulty occurs here. They knew perfectly well what they were talking about, but did not have words to express themselves. Thus Oribasius speaks of the vulva as lying between the bladder and the intestines, etc. I will state that this book is a translation into Latin of the fourth century. Oribasius, who was court physician to the Emperor Julian, was commanded to write a work on Medicine, and made an epitome of all the works on Greek and Latin medicine, in seventy books. This great work was translated into Latin by Dr. Rasarius of Novariensis in 1553. This work was published before the almighty printing press had made the multiplication of copies so cheap, and when much was done to save time and trouble by contracting

words that would admit of contraction. These old writers had to buy parchment, and the sheep skin cost money and the writing time, so that there was a double object in these contractions; then again the u and v look alike, and it requires some pains sometimes to determine which it is, and the "i" and "j" are alike, so that you will observe that there is some difficulty in reading it.

I will read to you first from Oribasius, on Procidencia :

DE UTERO PROCIDENTE.

"In the first place I empty the bowels, and the bladder may be emptied with the reed catheter, and then the patient being placed in the supine position, with the pelvis elevated and the thighs bent and the legs separated, the surgeon takes a warp of wool of the size and mold of the vulva—and wraps it with linen cloth and dips it in the juice of hyposistis and acacia." Saturates it with astringents and places this against the uterus and gently lifts it into position. "He now introduces the sponge into the vagina, and places the woman upon her back in bed with her thighs together, and one leg crossed over the other; and on the third day he removes the tampon and washes out the vagina with an astringent decoction, and again introduces the tampon, and sometimes places balsam upon the pubes and lower portion of the belly, and continues to keep the parts clean by washing them with astringent injections until a permanent constriction has been induced." Now I will read from the last sermon or discussion of the last one of the four books of Aetius.

"Concerning the rationale of conception and parturition and the diseases of females, more especially of the uterus and mammae, and also on the preparation of most valuable ointments and potions and fumigations :

THE UTERUS, ITS SITUATION, SIZE AND FORM.

The uterus, Greek metra, is called the matrix because all life, as it were, originates from the matrix. It is called hystera because it is situated beneath all the viscera. The site of the uterus is between the peritoneal membranes of the bowel; between the bladder and the straight intestine. The size of the uterus is not the same in all, for the uterus is often much less in those who are not pregnant, and much greater in those who are pregnant; and in those who never have had venereal connection it often remains through life of small size. Its greatest length is between the pubes and the umbilicus, and is attached to the symphysis pubes by ligaments. Its greatest breadth is between its two horns which arise in either side of the fundus. These horns first pass upwards and then turn back and bend finally to either side, where they are fixed to two sinuses tubes, and one lies upon either side of the uterus, and are erected during coition and drawn up, or conduct the semen from the female testicles. "And there is an opening in the neck of the uterus through which the

menses pass out and the womb receives the male semen, and the foetus itself, incredible to relate, also passes through it. For the remainder of the time it is scarcely large enough to admit the point of a sound; but during labor it extends until the whole foetus passes through it.

THE MANNER OF THE FORMATION OF THE AFTER-BIRTH.

"This is the way the secundines are generated: the vein and the artery at its mouth where it enters the uterus has at its extremity tubercles, just like haemorrhoidal eminences, and these are less in women than in the cow and goat and the deer and other like animals. But in brutes are softer and more mucous, and look like rootlets of plants. These eminences in the mouths of the veins at the time of conception in the woman are open, but following the time of menstruation they are closed and remain so the rest of the time, and are only open at this particular time, and conception at this time is impossible because it would be washed away. After the abundance of the discharge of the menses is over they are closed, at which time the semen is retained. At this time the semen being received and retained in the ureters reaches the acetabulum to the left or to the right, and conception is completed; the secundines are generated from the open mouths of the vessels opening at the summit of the uterus and on either side. This is the manner in which the after-birth is generated. After the conception the mouth of the uterus is again closed.

ON THE MENSES.

"At fourteen years of age the menses appear in woman. It is not the same time with all, nor is the quantity the same or the number of days through which the menses continue, but often more, sometimes less. Sometimes the interval between the menstrual periods is twenty-two and sometimes as high as thirty days, but seldom as late as the thirty-fifth day. It is a rare thing for a woman to menstruate after she is sixty years of age, and at this time the menses cease completely which have flowed abundantly heretofore; it begins with a flow of small quantity and irregularly and soon ceases entirely.

THE MANNER IN WHICH WE ARE TO KNOW WHEN A FEMALE HAS CONCEIVED.

The first argument or reason for knowing that a female has conceived is that the semen after coition was retained; if in the act of coition she perceived some shivering and felt some pain about the vulva and umbilicus; if the mouth of the uterus is closed, and not hard from inflammation but is closed within and without and a little elevated, if the venereal appetite still remains, where the menses fail to appear at the usual time, if the veins of the chest begin to turn green, and the mammae to become intumescent, and where in the process of time the milk appears in the breasts; if about

the second month of pregnancy the woman has the usual appetite for salt and acid substances; where the color is turgid, becoming pale or becoming red if the woman is robust; if following the second menstrual purgation the symptoms of pregnancy were aggravated and the mammae intumescent, with difficult movements of the loins, with red and high colored urine accompanied with pain when it was discharged, and where, after the menses; the heat of the cervix and vagina was decreased.

THE SIGNS WHETHER THE FŒTUS IS MALE OR FEMALE.

Hippocrates and others have noted that the signs of a male child were: if the pregnant woman is of good color and if the right breast is larger than the left, and especially if the nipple is so, then it is a male child. And if, on the contrary, the color is pale; and if the left breast is pale and very tumid and larger than the right it is a female child. If it is a male child the vessels of the right parts—the veins and arteries—are very intumescent, especially under the tongue; and in a female child the contrary appears. So likewise the nipples in a pregnancy with a female child turn downward; and in a male child they turn upward; but the most certain and least fallacious of all is that in pregnancy with a male child the pulse in the right hand and arm is quicker and larger and harder than it is in the left.

DE FŒTUS EXTRACTIONE.—ON EMBRYOTOMY.

"Before resorting to exsection of the foetus we may try medicine. Whether it will not relieve the woman or whether the case is deplorable, and where in this manner we may not relieve her we must relinquish the case as hopeless. The fatal symptoms of this affection are lethargic sleep and faintness, from which they are aroused with difficulty and after calling on them in a loud voice they respond feebly and fall back again in deep sleep; likewise when they are seized with convulsions and with trembling of the nerves, and the pulse is rapid and full nothing can save them but delivery. For this purpose the woman is placed in bed in the supine position, with the head low and the pelvis elevated. First we give two or three mouthfuls of bread with wine, and sprinkle wine upon her face for the purpose of arousing her from her depression of spirits. The surgeon now separating the pudenda with instruments examines whether it is a tumor or a callus eminence, or whether it may be removed by operation and if so he seizes it with a volsella and cuts it off with the scalpel, as will be related hereafter; but if the membranes obstruct the mouth of the womb it should be cut off also, as we will relate hereafter; but if the obstruction arises from the great solidity of the membranes that surround the foetus he must distend it with a volsella and puncture it with the scalpel, and enlarge the incision with the finger, so that the foetus can pass through it. And if the head of the foetus obstructs he must turn by the feet and

then deliver. And if he can not break up the obstruction in any other manner he must fix the hook of the tractor instrument in the eye or mouth or under the chin and extract the foetus. And this is the manner of extracting with the instrument. The tractor instrument is held in the right hand and the hook covered by the fingers of the left hand with which it is introduced gently and fixed in some selected part; and then the other instrument is introduced in a similar manner and fixed upon the opposite part, and traction is made equally and declined to neither side and not greater nor less is the traction to be made on one instrument than upon the other until the foetus is delivered, and the direction of the traction is not alone in a straight line but obliquely from one side to the other. The fingers must be smeared with some kind of ointment and introduced within the os uteri, and passed around the impacted body. After the foetus has been half extracted the instruments are to be transferred and fixed in a part above, and if the head, either from nature or from hydrocephalitic affection is tumid with water, and produces an impaction from its great size, it is to be opened with the scalpel and the waters evacuated, and the contracted head extracted. But if this can not be done, we must break up the calvarium and take out the bones with the fingers but if this fails they must be extracted with the bone forceps. The tractor instrument must be fixed in the parts and the foetus extracted. And if the head is delivered and difficulty occurs with the shoulders we must in the same manner dissect out the clavicle and open up the cavity of the thorax and evacuate the humors so that the mass will collapse. But if the obstruction occurs from a too great distension of the belly, because the foetus is dead, the same method must be pursued. We must open up the abdomen and remove the intestines. But if the hand is prolapsed we must resect it from the humerus, first having thrown a linen bandage around it and drawn it down slightly by which we can reach the articulation of the humerus, and having separated the labia and pudenda, we must dissect the part, and after this we must introduce the left hand, and thus bring forth the foetus. The same thing is to be done when both hands are prolapsed, and in a similar manner when the feet are prolapsed. But if the body does not follow we must dissect the limbs loose from the groin and the hip joint, and if the foetus becomes doubled, and we are not able to unfold it, and if the head is most exposed, we must break up the bones and dissect it out, then we must fix the tractor instrument upon this part and extract it and draw out the limbs and dissect them at the hip joint, and dissect the coxal articulations and break up the pelvis as we did the head. But if the belated head is detained, the left hand is to be anointed with some kind of oil and introduced into the fundus of the uterus, and the head is to be seized and brought through with the fingers into the os uteri and one of the tractor instruments fixed

in it. And the proper place for fixing the tractor instruments are the head, eyes, meatus of the ears, mouth, anterior parts of the chin, in the thorax, axilla, clavicle, præcordia, the breasts, vertebral raculations, legs and bones of the pubes, the female pudenda if it be a female child. And then if the mouth of the womb is closed, if there is inflammation, no violence must be used, but we must anoint the parts with fat and use irrigation and cataplasms by which the inflammation is reduced. And after the mouth is dilated and the foetus is delivered, and after the dissection of the foetus we must compose again the parts diligently, observing that no parts have been left behind."

QUOMODO OPEM OPORTET EIS QUÆ NON TUTO
CONCIPIUNT.

The manner in which we may extend aid to those women in whom conception is hazardous:

Conception in some women is attended with great danger, either because of the smallness of the uterus, or because the foetus is not able to escape, from the narrowness of the neck of the uterus, or from a tumor, or a like condition of the bones of the pelvis which impedes parturition, and certainly it is best in these if they can altogether avoid parturition, for if they conceive it is necessary to destroy and dissect the foetus. Therefore from the rule of destroying the foetus we must take measures for the induction of sterility. For that which induces sterility differs from that which destroys the child; this done, conception is prevented; that done, and the child is destroyed and removed. Therefore, as the woman must not conceive, she must avoid congress with the male at the time when conception is most likely to take place, which is manifestly just before and just after the menstrual period; and then at the time of coitus itself, when the semen of the male is ejected, she must hold her breath, whereby the semen is not carried into the cavity of the uterus, and she must get up immediately and place herself upon her knees, produce sneezing, and cleanse the pudenda carefully. And for the prevention of conception the os uteri must be anointed with honey, or with opobalsam or cedar oil, either by itself or mixed with white lead or liquid alum or galbano with wine. To the same end cold and astringents when carried to the meatus just before coitus close the mouth of the uterus, and prevent the semen entering its cavity. Warmth, truly, not only incites the male semen but expels it from the uterus, and likewise draws the other humors and smears over the parts, and by avoiding those things that are followed by conception, sterility is induced.

It is here seen that "there is nothing new under the sun." The reasons here given for preventing conception are legitimate and proper, and the means used doubtless efficient in most cases. The chapter is doubtless by Aspasia, who is credited with the one preceding it, on the aids to difficult parturition, and who, doubtless, is also the author of the article following this, on the means of pre-

venting conception, and, from its fullness and the undoubted efficiency of many of the means taken, there is no reason to doubt that it was for quite different purposes than to prevent conception in deformities. Doubtless the women of Greece and Rome had the same objection to bearing children that gives to the gynecologist hundreds of cases among women of the present day, and if this long list of medical suppositories and potions given by Aetius were less efficient than some of those used at the present day, they were also less dangerous.

DE UTERUS OBSTRUCTIONE.—OF OBSTRUCTION OF THE UTERUS.

There may be obstruction about the mouth or neck of the uterus, either because of previous ulceration, or from induration from inflammation from which the part is so greatly narrowed as not to sufficiently admit the semen; or, this being admitted, is not retained, because, on account of the hardness, the womb cannot contract. If, however, the semen being admitted and retained within the greatly narrowed os, a foetus is caused, this indeed leads to the death of the pregnant woman because of the too great contraction of the parts the foetus cannot be expelled. In this case we must use decoctions of fennel and oil and water, and relax the parts with emollient suppositories of wax and those prepared from cespypus turpentine and nitre. And when the parts are so-tto the touch we must introduce a *sponge tent with a cord attached* within the contracted part for its sufficient dilation, and after its removal we must introduce a larger one, and for this purpose we must have prepared many and different sized sponge tents, and afterwards we must smear the sponges with the following ointment: Ext. Sandarach, dry alum, aa. ʒi; orpiment ʒij, rubbed up together with honey. *The sponge tents are placed in this until coated over; and if it is seen that the dilated sponge has not sufficiently opened the part, and inflammation has sprung up, the sponges must be covered with the following ointment: Iridis ʒij, goose grease, turpentine, frankincense, oil iridis aa ʒi. First the iridis, then the frankincense is reduced to the finest powder and sifted, then the turpentine and goose grease are added, and they are all united together. But when the inflammation has subsided and the part is open the sponge may be smeared with a preparation of rose oil and goose grease, in the use of which we should persist until cicatrization is induced and the place slightly consolidated. This is evidently from Archigines.*

DE CALCULI UTERI.—OF CALCULI OF THE UTERUS

Tufaceous calculi are sometimes generated in the uterus itself which, if we desire to extract, we first evacuate the bowels of stercor with a glyster, and then wash out the uterus with a decoction of fennel or mallow, mixed with resin, when the woman is placed supine with her legs separated and placed upon two stools. The finger of the

left hand is introduced into the foramen of the anus, while the right hand compressed above upon the abdomen feels the calculus, draws and pushes it, at the same time with the finger in the anus conducts and pulls it, and when the tufaceous substance has been brought within the neck or the lips of the uterus, the woman being properly placed and the parts dilated with a *speculum*, it must be cut off with a scalpel and the parts sprinkled over with a dry medicated flower.

DE CALCULI VESICÆ MULIEBRIS.—ON CALCULI IN THE BLADDER OF FEMALES.

"Calculi are rarely produced in the bladder of women because they have a straighter and wider meatus urinarius, and when by chance it is generated it may be extracted thus: The woman being placed with her hips hanging over the edge of the table her legs bent and placed on two chairs. The finger of the left hand is introduced into the pudenda with the right placed above the pubes and expels the calculus against the neck of the bladder, and now a little above the wings of the pudenda, at which place the calculus has arrived, an incision is made, and it is seized with a calculi forceps and extracted. Afterwards the incision is filled up with frankincense, and clean wool imbued with warm oil is placed upon the abdomen, and two or three times during the day, and once during the night, it is removed and the place washed with warm oil; and on the third day we fill the incision with dry soft medicaments used for the formation of granulations, and continue this until the production of flesh is perfected."

DE UTERO NON PERFORATA.—ON NON-PERFORATION OF THE UTERUS.

"Some women have from nature the uterus not perforated, and this obstruction may occur at three different places. In some cases the obstructing membrane, or flesh springs from the sides of the pudenda itself or from the labia; in others the obstruction occurs within the vagina itself; in others again the obstruction is above the lips of the uterus itself. In those cases in which the membrane arises from the lips of the pudenda the cure is this: We place the patient in the supine position, with the legs flexed and separated, then with a scalpel, we cut away the obstructing membrane until the shape of the pudenda has attained the natural dimensions. Afterwards we fill the lacerated section with lint and bind it there, and for the cure of the suppuration we apply daily some kind of poultice, then we use lint imbued with rose cerate; and if, after section, the sides of the pudenda appear to be united by the joining of the fleshy parts, we again break them up and separate them with lint and pursue the same course of treatment. The woman must be placed in the supine position, with a pillow between her thighs until cicatrization is produced. But if where the external figure of the pudenda is open, the vagina is obstructed by flesh springing up within it, so as

to leave a narrow opening, the woman being placed in the same position a *sound* is conveniently introduced into the neck of the uterus for the greater safety, for we must not through error make the section too deep; then, guided by this sound (stilum), we must denude the part with a broad knife until the vagina is seen to be according to nature; then the labia being distended, we continue to dissect the flesh to a quadrangular shape, we trim off the dissected flesh, and stand the woman up, with the legs separated for the fluids which have collected in the uterus to readily flow away. When this has been done sufficiently the patient is placed in the former position; and lint imbued with wine and oil is placed between the divided surfaces; but this should have a cord tied around it that we may extract it readily. The parts being properly dressed we should command quiet. On the following day the place must be washed with water, wine and honey, and a tampon of lint immersed in ointment for suppuration is introduced, and when cicatrization has taken place a *tin tube* is introduced and bound in the vagina until the parts are consolidated. Should the parts again become joined together, so that the mouth of the womb is again closed, we must put in a *sponge tent* until the hardness has been removed. If membrane obstructs the mouth of the uterus aself the woman is placed in the same position and the vagina distended by the introduction of a speculum (dioptra), the membrane seized by a volsella, distended and twisted until all are bound together and amputated with a broad scalpel. A tampon of lint with a thread tied around it is introduced, and the same treatment pursued. Should there remain any of the membrane the cure may be completed by a medicated flower called psaro. To cleanse the part it may be washed with this medicated liniment: wax, turpentine, goose grease aa. 3 ij; oil iridis, thuris. aa. 3 i; saffron 3 ij; oil irini 3 xiv; rub up the saffron and frankincense into a paste, and mix them with the liquids until the whole becomes liquid. The introduction of the *speculum* must be continued and the flesh not allowed to spring up in the cavity, which can be prevented by the following medicament: ℞ scales of copper, rust of copper, frankincense bark aa. 3 ij; rub up together and use; or the rust and scales of copper with lead mixed together and given. But the use of the sponge tents (spongiæ siccæ) is not to be discontinued until the hardness of the lips is subdued, also the tin tube is to be introduced into the canal.

ABSCESSUS ORIS UTERI CHIRURGIA.—THE SURGICAL TREATMENT OF ABSCESSES ABOUT THE MOUTH OF THE WOMB (PELVIC ABSCESSES).

“When an abscess exists about the mouth of the womb which can be treated surgically it is best not to incise too soon, but to wait until, by inflammation and pressure of the contained pus, the parts are greatly thinned. The woman is then placed supine in a seat with her thighs flexed upon her

abdomen and the legs separated, with her arms placed under her thighs and properly bound by a cord passing over her neck, and thus arranged she is placed before a strong light. When the surgeon seated at her right side with a *speculum* instrument suited to the age of the patient, with the pudenda separated makes an examination, and with a *sound* measures the depth of the woman's vagina, so that he may not compress the uterus by having a *speculum* with too long a stem, and if it is found that the stem is longer than the vagina, he may place a roll of wool upon the labia or sides of the pudenda, so as to make the *speculum* firmer. The stem should be so introduced that the screw is turned to the upper part, and while the surgeon holds the *speculum* the screw is so turned by an assistant that the vagina is distended by the separating of the plates of the stem, and when the abscess is brought into view, if soft to the touch, and the apex thin, it may be opened with the point of the scalpel or a lancet, the pus being discharged, a thin piece of lint covered with rose cerate is placed in the incision, and a piece is also placed outside the incision within the vagina, and moist wools, or wet with pure oil, is placed on the labia pudenda, pubes and loins; then, on the third day, the woman is seated in a bath of warm oil, or decoction of mallows, and a thorough cleansing made, and a piece of lint smeared with tetropharmics by itself or with honey is gently placed within the section, and a cataplasm made of tetrapharmacum diluted with butter or rose oil is placed on the outside until the inflammation has subsided and suppuration established. But if there is difficulty in cleansing the wound it may be washed with a decoction of iridis by means of an ear syringe and a plaster prepared from calamine or lead, or that which is from the class of burnt preparation either diluted with rose oil, may be used until the wound has cicatrized. But if the abscess should be within the mouth of the uterus, surgery must not be resorted to, but the cure must be after the manner we have previously related.”

This article is by the distinguished Greek Gynecologist, Archigenes, who lived A. D. 50. His uterine abscess, under our more accurate nomenclature would be known as pelvic abscess; it would however be the same thing, and the treatment here recommended could scarcely be improved upon at the present day. But what is of the greatest interest is his full description of the manner of using the vaginal speculum which—without any intention of describing an instrument with which he supposes every one is acquainted—gives us so accurate an idea of the instrument itself as to leave but little glory to Ambrose Paré in 1640 or to Astruc in 1761 or Récamier in 1801–1819 in *discovering* this useful instrument. All that was necessary with these discoverers was to read this chapter of Aetius on the surgical treatment of uterine abscesses, or the previous chapter by the same author. J. Y. Simpson's discovery of sponge tents is accounted for in so

admirable a description of the use, dangers and how to avoid, the latter, of sponge tents as to almost induce the belief that these discoveries were but thefts.—*The St. Louis Medical and Surgical Journal.*

THE SURGICAL USEFULNESS OF IODOFORM.

By G. FRANK LYDSTON, M.D.

Dr. Hofmaki, at the conclusion in a paper on the surgical uses of iodoform (*Medizin-Jahrbucher*), draws the following conclusions:

1. Iodoform is an excellent disinfectant, and, as a rule, is a painless applications to wounds.
2. On account of its slight solubility, it is of little value in complicated wounds of cavities.
3. It does not prevent the occasional outbreak of erysipelas.
4. It is not a specific against scrofulous or tuberculous processes, and develops its healing properties most notably in ulcerous processes.
5. By keeping wounds fresh and clean it furthers granulation, though it has but little influence on the final cicatrization of the wound.
6. Very thin layers of powdered iodoform do not hinder union by first intention.
7. In pharyngeal and laryngeal diphtheria of children, iodoform does not give much better results than other antiseptics.
8. In wounds and ulcers of the mouth, rectum, vagina, as well as in open, easily accessible wounds in the cavities of bones, iodoform in the form of a thirty to fifty per cent. iodoform gauze, is an excellent antiseptic dressing.
9. Parenchymatous injections of iodoform generally cause a great deal of pain, and it cannot be said that they give very excellent results in fungous diseases of joints and glandular swellings.
10. Iodoform ointments and plasters are often of good service in parenchymatous goitres and chronic swelling of glands, joints and tendons.
11. Iodoform in large quantities is undoubtedly dangerous, and is more productive of good results and less hurtful in small doses.
12. Childhood is not a contraindication for the use of iodoform.
13. The preliminary cleansing of fresh wounds with weak carbolized water before using the iodoform dressing is of no advantage, so far as Hofmaki's experience goes.
14. The healing of scrofulous and tuberculous sores by iodoform does not prevent their return.
15. Iodoform is an excellent means for the thorough removal of disagreeable odors of neoplasms which do not admit of operation.
16. The occasional syringing of suppurating cavities with small quantities of iodoform emulsion will often have a favorable action on the quality and quantity of the pus.
17. The introduction of iodoform bougies into the urethra and bladder will often alleviate pain, as also in vesical tenderness and suppurative

conditions of the bladder, and will exert a favorable influence on those conditions of the urine in which rapid decomposition takes place.

18. The application of iodoform bougies to long fistulæ of the soft parts is more hurtful than useful, as the fistulæ are only stopped up and the products of decomposition are not discharged. Equally unwise is the filling up of the mouth of a fistula with dry powdered iodoform. (*Am. Journal Med. Science.*)

PHTHISIS.

By J. A. OOTERLONY, A.M., M.D., Professor of the Theory and Practice of Medicine in the Kentucky School of Medicine.

GENTLEMEN:—At the last lecture I spoke to you about the pretubercular stage of phthisis. To-day I want to say a few words about tubercle. Tubercles occur in two forms—the gray and the yellow. They differ considerably in outward appearance, in general conformation, and in their tendency to disintegration, but chemically they do not materially differ.

What we call gray tubercle occurs in semi-transparent nodules—very small indeed—and tend to remain in the form in which it is first deposited for a considerable time. The yellow tubercular mass tends to rapid aggregation, to rapid disintegration, and very speedily forms an abscess. First there is a softening; then the mass becomes quite liquid and purulent.

Chemically tubercle consists of two elements—organic and inorganic. The organic consists of albumen and cells; not typical cells, but dwarfed, stunted, and mishapen, without nuclei, without any tendency to form new cells, to reproduction. These cells are surrounded by granules of fat.

The inorganic elements consist of phosphate and carbonate of lime. There is no fibrous stroma in tubercular matter as there is in cancer. Whenever you find fibrous tissue in the sputa, it is the result of destruction of the lung tissue.

How does tubercular matter grow? Surely by no vital change. It is incapable of any vital change at all. It enlarges only by continued aggregation on the exterior. A number of tubercles merge together, and then new tubercular deposit takes place on the periphery of this collection. But there is no cell proliferation. The cells are just like sickly people—incapable of reproducing their species.

When tubercle has once been deposited, what are the transformations that take place? To you this is an important consideration. First, we find that tubercular matter may undergo absorption. That is a glorious fact; but, unfortunately, it does not often take place. So seldom indeed that in a considerable experience I have never seen it occur. I have seen cases of phthisis get well, but never a case where I could say there was absorption of tubercular matter when once formed. I mean absorption *in toto*. It is possible, because

very excellent persons have noted cases in which, by unmistakable signs, the existence of tubercles in the lungs was made out, and in which there was complete subsidence of the symptoms and of the physical signs that indicate their presence in the lung. So we are bound to admit that in rare cases tuberculous material may become entirely absorbed and the constitutional symptoms disappear.

Another transformation which tubercles may undergo is this (and I could hardly say that it is a transformation, but it is one of the events which take place in phthisis): the lungs become tolerant of its presence; the constitutional symptoms disappear; the local irritation passes away; and the tubercular matter entirely unchanged for years perhaps, will lie in the lung-tissue in the condition it was when it first made its appearance there. There it may be absorbed in part. The albumen and animal portions become absorbed, the earthy constituents remain, and, becoming encapsulated, form calcareous concretions. These may remain for a long time in that condition.

Indeed when this change has taken place the subsidence of all the symptoms occurs. Sometimes, however, we find it does not take place exactly in this way; but while there is an absorption of the animal constituents of the deposit and a formation of concretions, still there is a little deposit of fresh tubercular matter on the periphery which undergoes softening, and thus this chalky material at last lies in a sort of cavity made for itself, which may finally invade a bronchical tube when the matter is expectorated. When that happens it is usual to find that the cavity which held the earthy concretion heals up. It is certain that under these circumstances the case runs a very slow course, and the occurrence of chalky concretions in the expectorated matters is therefore a favorable omen.

Tubercles situated close together often become aggregated and begin to break down, and in the process of destruction they involve the lung-tissue in which they lie, and large cavities, in proportion to the extent of the destruction, will follow. This, unfortunately, is the most usual course.

Now what special termination of any particular tubercular deposit shall occur, depends upon a number of circumstances, and these must all be taken into consideration. If you want to be successful physicians in the best sense of the term you must take broad and enlightened views. A man who simply sees facts and can not trace the connection between them never will be any thing but a routine practitioner, and will utterly fail to attain the highest degree of professional success.

The result, then, in any one case will largely depend upon the form of tubercular matter—whether it be gray or yellow.

Gray tubercles, as I have already told you, tend to remain unchanged for an indefinite length of time, and such cases as are characterized by the

deposit of gray tubercles run a very slow course. They do not so easily take on destructive action, and in this fact you may find an explanation of another, viz., that there is the greatest difference in the course of termination of different cases of consumption. One case reaches a fatal termination in a year; another will go on for fifteen or twenty years.

Then the manner in which the tubercles are disposed, whether there are many or only a few, whether they are scattered in small amounts over a large surface, or whether they be massed together within a smaller circle. If there is a great mass of tubercular material in one point, it is not so favorable as when there are a few scattered here and there. Then, again, we must take into consideration the amount of irritation their presence excites.

When you come to study tuberculosis at the bedside you will find that a great many of the phenomena of the disease are only secondarily due to the tubercles. You will find many of the symptoms are symptoms of irritation, of constitutional disturbance, excited by the presence of this deposit in the lungs. Now we find that when there is very little constitutional disturbance there is much more likelihood of the absorption of the animal constituents of the tubercular material and the concretion and encapsulation of the earthy constituents. We are much more likely to have it lie innocuous than when we have evidence of great constitutional disturbance. And, finally, we will find that the course and duration of the disease and the transformation of the tubercular material will depend upon the subsidence and cessation, or the revival of that constitutional dyscrasia which first gave rise to the tubercular deposit.

Now if constitutional disturbance disappears we may look forward to absorption, more or less perfect and complete, of the tubercular deposit; but if, on the contrary, we find that it does not subside, then we will find that an unfavorable progress and transformation will be certain to ensue.

Consumption is, in the first place, a disease of nutrition. It is a constitutional disease. It is a diseased condition of the system in the course of and in consequence of which there is a tendency to the recurrence of a tuberculous deposit in the lungs or other organs of the body.

Now you will remember the patient we had at the last clinic. Let us recapitulate the symptoms of his case, and see how they tally with what is usually found to be the symptomatology of phthisis in the first stage. At the last meeting I spoke of consumption before tubercular deposit had occurred. Now let us suppose that tubercles have formed. Already we find that their existence in the lungs will give rise to physical signs which are quite distinct, but often there are constitutional disturbances found before the tubercular matter is deposited, though of course we are likely to

have constitutional disturbance more marked if the tubercles have already formed.

The symptoms of the first stage of phthisis will be found to be as follows: Continued wasting. We can no longer say, as we said about the wasting in the pretubercular stage, that there is no local cause for it, for now a physical examination will reveal a local cause adequate to account for it. Then fever of a remittent type. Sometimes there will be two remissions and exacerbations daily, sometimes only one. You will find there is a persistently elevated temperature; the pulse constantly higher than is compatible with health.

There is to be noted in this connection that what constitutes an increase of the pulse in one person would not be so in another. You must remember that the frequency of the pulse in different individuals is as variable as the individuals themselves. It is an uncommon thing to meet with two persons having a pulse of the same character.

Among my patients I can select persons who have persistently, when in health, a pulse of over 100. There are individuals who have a nervous system so exceedingly sensitive and excitable that the heart, on very slight provocation, will be excited to a degree of activity that is far above what would exist in you or me under similar circumstances.

Then you will meet with others whose pulse is exceedingly slow. I have a patient who is certain to have fever when her pulse is 80, because, normally, she has a pulse of 60. So when you examine a patient you may find a pulse of only 80, and yet it may be that there is really persistent acceleration.

You may meet with a case of phthisis in which the constitutional disturbance is exceedingly slight, and yet physical signs will reveal that there is a tubercular deposit in one or both lungs.

There will almost certainly be digestive difficulties, and these are proportionate to the general disturbance of the system. When they are very marked it augurs ill, because they strike directly at the nutrition of the patient, and when this becomes very much impaired the wasting and loss of strength and vital power will be very great indeed.

In women there are menstrual disorders, and, unfortunately, at the same time, it does not seem to put a stop to their child-bearing capacity.

Often enough one of the early symptoms of phthisis in women is the cessation of the menses, and just so long as this amenorrhœa continues it augurs ill for the patient. When, in a phthisical patient, in whom there has been suppression for a long time, the menses return, it is a favorable sign.

These patients complain of dyspnoea and of pain in the chest. This pain is pleuritic in character and in origin. It is due to circumscribed pleurisy. They suffer from languor. There is no longer the capability for the same amount of

physical or mental exertion they could once undergo, and then, after a while, they suffer from hemoptysis. This last named has been an early symptom in our patient.

Hemoptysis in the first stage is congestive in character, and therefore we find that the amount of hemoptysis indicates the degree of congestion, and the amount of congestion indicates the degree of irritation that the tubercular deposits have set up. For this reason frequently-recurring hemoptysis, as a rule, constitutes an unfavorable prognostic. These losses of blood are seriously detrimental to these persons whose blood-making powers are very poor, and who, besides this, are laboring under almost constant febrile disturbances, so that we may say the constructive processes are very much below par, and the destructive processes are much more active than they should be. Here you have the explanation of the loss of strength and flesh, which is steady and progressive.

A curious thing about these people also is that they can not be easily induced to eat fatty food. They do not like it in any shape or form. They are often averse to taking cream. The very things they ought to have they seem to have a decided antipathy for.

Cough is invariably present in phthisis, and probably signalizes the first deposit of tubercle in the lung, but this symptom is not continuous; as the lung becomes tolerant of this foreign material in its tissues the cough lessens or altogether ceases for a while. The cough of phthisis differs in character according to the stage of the disease, and is far from being always produced in the same way. In the first stage it is irritative, and often reflex; it is dry and hacking. It may be kept up by a morbid condition of the pharynx and upper part of the respiratory tract. It is only in the later stage that the cough becomes necessary to clear the air-passages of muco-purulent accumulations.

This constitutes about the symptomatology of the first stage.

What are the physical signs? They vary very much according to the quantity of tubercle deposited, the size, and aggregation into masses. They vary also according to the duration of the disease and according to the amount of local irritation; and you will have to distinguish at the bedside between the results of congestion and inflammatory trouble and the physical signs that are produced by the tubercles themselves. This is not very difficult to do. If the disease has lasted any length of time and there is a pretty extensive deposit, you will find there is flatness or sinking in of the affected side. When there are changes in the chest-walls generally you may conclude that the tubercular deposit is of considerable age.

With this flattening you discover there is a certain degree of immobility; you make the patient draw a long breath, and find that side does not

expand so readily as the other. You perform palpation, and find the vocal fremitus may be somewhat diminished or it may be increased. If the deposit of tubercular matter is slight, so as not to exclude a large amount of air, or if it is scattered throughout the lung, it may be increased. If there be a very large deposit, the vocal fremitus is decreased. But there is perhaps no positive rule to be laid down as to this. An increase or diminution in vocal fremitus is not of very great importance, because it varies so with the amount and manner in which the tubercular deposit exists.

There is more or less dulness on percussion, and certainly a considerable diminution in resonance.

On auscultation inspiration is harsh, expiration prolonged. There may be bronchial breathing. The expiratory sound is then longer; it is also elevated in pitch, and there is an appreciable pause between inspiration and expiration. Bronchophony may also be present.

There is one physical sign that is of considerable importance, which for several reasons I have reserved for consideration until the last, and that is wavy inspiration. Instead of the inspiratory murmur being continuous it is interrupted two or three times in the course of one inspiration. This is produced by the solidification of the superficial layer of the lung and some thickening of the pleura generally, and it may be found in the first stage of the disease as well as in other conditions. It may be indicative of a slow course of the disease or it may not. It is often merely a transitory sign, and one which indicates that the tubercular deposit is going to undergo very speedy disintegration. Wherever it has been once and has disappeared, to be followed by other physical signs, such as mucous râles or moist râles, it never returns; and whenever it makes its appearance right on the surface of the tubercular deposit you may make up your mind that that deposit is going to be very much enlarged in a very short time. It indicates that there has been a fresh deposit, made on the periphery of the old deposit and that it is about to undergo softening.

Now suppose you have a case of phthisis before you, and the patient says, What shall I do? Shall I go away from home? Shall I go to Florida or Colorado? What must be my course of life? I must arrange my business if you think I can prolong my life to any reasonable degree by closing it. Then comes the time when you must ask yourself, What are the unfavorable and what are the favorable indications in his case? Are there any signs that will enable you to say this case will be slow in its progress, or that it will be rapid and of short duration? I know of nothing more important, nothing that comes home to the physician more in his dealings with those patients than this very question of prognosis. If the patient come of tuberculous stock, I would

inquire very particularly what form of consumption the other members of the family have suffered from. For instance, if the patient's father was attacked at the age of thirty-five with rapid consumption, and this patient happens to be about the same age, I should strongly incline to the view that his case would probably run a similar course. The personal resemblance also has something to do with strengthening that probability. If a man have a consumptive father and he resembles his father more than his mother, I would consider that an unfavorable prognostic. If a patient takes more after his mother, who is not tuberculous, he is more likely to inherit her peculiarities, and it is a favorable sign and should be so considered in summing up the facts for, and against him. If the disease sets in with a violent local irritation, it is a bad sign. If it sets in with great constitutional disturbance, high fever, copious night-sweats, and rapid loss of flesh, that is a bad sign. If he has had frequent attacks of hemoptysis I would regard that as unfavorable. I would consider also the extent of the deposit—how large an amount of lung-tissue is involved—and if a large amount be involved I would take an unfavorable view, so far as duration is concerned. Again, if you find the tubercular deposit massed together, I would say that is against him. If the deposit were in the left instead of the right lung I would say that is unfavorable. If, on the contrary, phthisis occur in a person whose relatives suffer from a slow form of the disease, I would put that in his favor. If the disease has already lasted a good while and it is not causing very violent local irritation, that is certainly favorable. If you find it is not very extensive in the right lung and not in the apex, that is a favorable combination. In scrofulous people the deposit is more often in the base, and scrofulous tuberculosis runs a very slow course. If there has been very small loss of blood from the lung, that is favorable, although you will really find that persons suffering from phthisis are always relieved by the bleeding from the lungs. They don't feel so distended; they breathe much easier; and altogether they feel better after a moderate hemorrhage. It is really a spontaneous curative effort; but when the losses of blood are very profuse they become weakening, and are of course the result of excessive congestion.

Now these are points of prognosis which you can not afford to ignore, and you must take them into consideration in giving your advice. *Medical Herald, Louisville, Ky., U. S.*

THE TREATMENT OF VIOLENT DELIRIUM IN FEVER CASES.

Dr. J. W. Allan (*Lancet*): The management of violent delirium constitutes one of the most difficult tasks to those having the charge of fever cases. The following remarks are meant to apply

to typhus and enteric, and to severe attacks of delirium in these diseases.

Mild muttering delirium clearly does not call for active treatment; it is best met by such gentle measures as shaving the head, applying evaporating lotions to the scalp, sponging the skin with lukewarm water and vinegar, etc. Even that form of delirium, common in typhus, in which the patient insists on getting out of bed to go to his work, etc., may generally be controlled easily by a skillful nurse, who has only to use persuasion and gentle restraint to keep the patient in order. Sometimes such cases insist on sitting on a chair by the fire or going round the ward on a tour of inspection, and I have known an old and experienced nurse gratify these whims with the best possible result. The patient gladly returns to bed after the exertion, feeling tired in body but satisfied in mind, and frequently falls into a refreshing sleep. Of course such liberties could be accorded in certain cases only, and under the personal supervision of an old experienced nurse. The cases which are difficult of management are those in which the delirium assumes a wild or fierce character. The worst cases of all are those in which there is pulmonary complication. When a muscular young man is seized with a violent delirium at an early stage of illness, before his strength has been seriously impaired, great trouble is usually in store for those in charge. As a rule the patient is in a state of terror or apprehension. He thinks that he is in danger of being murdered, or he believes that he is about to be consigned to hell fire. He is simply desperate, and this constitutes the great danger of the case. Sometimes he is cunningly planning his escape. At this stage he must be closely watched. There is a peculiar look about the eye, not easily described, but once seen readily recognized again. There is also change of manner; questions are answered abruptly, or an obstinate silence is maintained. The man is in a dangerous state; a violent attack may occur at any moment. Every trivial action, every careless word of the attendants, has for him a sinister meaning. Without warning he may spring from the bed and dash through a window. The probability is that the patient has not slept for some time, and, recognizing his dangerous condition, the medical attendant is naturally anxious to administer a draught, so as to secure deep, refreshing slumber. But, to his great annoyance, the patient absolutely and doggedly refuses to swallow a drop, and for the very good reason that he believes an attempt is being made to poison him. This reminds one of the notions of the insane; and there can be no doubt that the delirious patient is temporarily insane. It may be that the attempts to get him to swallow the draught have roused the man to active resistance, and his violence may be so extreme as to necessitate the help of several persons and the application of mechanical restraint. The latter should never be resorted to when it can possibly be avoided; but when it must be em-

ployed, let it be done quickly and effectively. Plenty of help should be obtained, for if the patient is strong, and one or two persons try to put him under restraint, the result may be a severe and prolonged struggle between the patient and attendants—an exasperating kind of exertion, which is bad for all concerned. The patient should be gently but firmly overpowered, when, as a rule, feeling helpless, he will submit. The "jacket" and "sheet" should then be employed, great care being taken to make sure that the long sleeves of the jacket are bound firmly round the patient's wrists, otherwise he will withdraw his hands and soon set himself free. When the jacket and sheet have been properly adjusted the patient is secure, but it is not desirable that he should be kept tied up a minute longer than it is necessary. If he still refuses to swallow the draught, what is to be done? A hypodermic injection of morphia might be given, but I confess to a prejudice against this practice in fevers cases, from a fear of causing local irritation, boils, etc., and, besides, the pain inflicted by the thrust of the needle, though slight, would confirm the patient in his belief that he was in the hands of the enemy.

I find the following method to work well: Morphia suppositories are administered till the patient becomes quiet and drowsy. He is then manageable. The jacket and sheet can be removed and warm, dry flannels, etc., put on. The probability is that he can now be got to take a draught, or at least to swallow passively. If he still refuses, morphia suppositories can be administered as required. As to the nature of the draught, I may state that I adhere to the hydrate of chloral, long ago tried and recommended by Dr. James B. Russel, in the treatment of fever cases. When there is simply insomnia, twenty or twenty-five grains of chloral hydrate in syrup (repeated, if necessary, in an hour), generally secures good sleep for an adult. When, however, there is violent delirium, the addition of five or ten minims of solution of muriate of morphia causes the end in view to be more rapidly and effectually attained. But this combination of chloral and morphia is well known to be a formidable one; it requires to be carefully administered, and the effects must be closely watched. When the narcotics require to be given for a long time on account of persistent delirium, it is convenient to prescribe a mixture, each dose of which contains ten grains of chloral and five or ten minims of solution of muriate morphia, the interval between the doses being determined by the effect produced. Respiratory embarrassments, lividity of nails, etc., are serious contraindications to the use of narcotics. When suppositories and draughts have both been given in a case, this should be well borne in mind so as to estimate the combined effect. In the treatment of violent delirium in fever, narcotics wisely given may save life; improperly given, they may hasten, or even directly cause, death. In prescribing them, no routine practice can be adopted, and their admin-

istration demands the most careful personal supervision of the physician in attendance.

THE THERAPEUTICS OF DIPHTHERIA.

BY DIFFERENT AUTHORITIES.

ALFRED STILLE.—*Local*.—Ice in mouth and on neck first stages. Alum or tannin by insufflation; muriatic acid by a brush; potassium chlorate; tincture iodine; lactic acid is a good solvent of the membrane; carbolic acid; potassium permanganate. *General* treatment is the indication, as the membrane will return till the cause is removed. Emetics may be advantageous in the early stage. "Supporting of nature is the only way to treat;" nature will eliminate the poison; in grave forms, stimulate; alcohol and stimulant doses of quinia; tincture of chloride of iron is absorbed, constricts the blood-vessels, and previous exudation; food is the greatest of all indications; opium diminishes waste and nervousness; it also aids in the appropriation of other stimulants; alcohol can be borne in large doses; fluid beef, milk, farinacea; Huxham's tincture. In cases of medium intensity, give tonics rather than stimulants. Tracheotomy is fatal in about three-fourths of the cases. It is advisable under favorable circumstances.

J. SOLIS COHEN.—The two main indications consist: 1. In keeping up a supply of nourishment and stimulants, and 2. In providing for the detachment and discharge of the morbid accumulations when they threaten to occlude the air passages. The sick room must be systematically disinfected. This is done by the free use of sprays of carbolic or sulphuric acid. Solutions of the sulphate of iron or some other disinfectant are kept in all the vessels which are brought into the sick room to receive the discharges, the soiled clothing, refuse food, and slops of the patient.

He regards the chlorine compounds as of more efficacy in diphtheria than all other remedies. Of these he prefers the tincture of the chloride of iron which must be administered at frequent intervals and in large doses—from five to thirty drops, according to age and vigor of patient, should be given from every half-hour to every second hour as the case may be. It is given in glycerine and water, or in diluted syrup of lemon. Dr. Cohen prescribes chlorate of potassium very frequently in this disease—in the form of *chlorine* mixture (made of an equal number of grains of the chlorate and of drops of hydro-chloric acid, in plain or aromatic water, or in the infusion of quassia). He always suspends the use of this remedy when there are any symptoms of renal irritation produced by it.

He administers the hydrochlorate of quinia (in preference to the sulphate) as a tonic, antipyretic, neurotic, and antiseptic. It is to be given in decided doses. When deglutition is painful it is given by enema, with proper augmentation of the dose.

Alcohol, in the form of strong wine, or as brandy or rum, is regarded as of the utmost importance when the system begins to give way. It should be given after the earliest manifestations of decided loss of vigor. At this stage it is of more importance for the time being than any remedial agent. From $f \frac{3}{4}$ ss. to $f \frac{3}{4}$ j. of brandy are to be given at intervals of from fifteen minutes up to three hours. As long as it is well borne it may be given to any extent short of intoxication. Children readily take a sort of syrup of brandy-made by burning it beneath a lump of sugar, which becomes melted in the process. At moments of sinking he regards carbonate of ammonium as valuable. He gives from two to ten grains by the mouth, in syrup of acacia, or from eight to forty grains by the rectum. At moments of collapse the ammonia is given by intravenous injection.

The sore throat is treated by pellets of ice placed in the mouth and renewed more or less cautiously. The use of ice-compressors is not approved. It is thought better to apply warm cotton batting, spongio-pilin, or an actual cataplasm, or to anoint the neck with oil, lard, or cosmoline, care being taken not to abrade the cuticle lest local infection arise as a complication. Morphia is administered when great pain arises.

Morbid products in the pharynx and nasal passages undergoing detachment should be promptly removed. This morbid product is kept diffused as much as possible by maintaining an excess of humidity in the atmosphere of the room by keeping a steaming vessel of water on the stove. The uninvaded tissues should never be cauterized. Applications of the tincture of the chloride of iron should be made to the pseudo-membrane with a swab of cotton or sponge. After this application the attempt may be made to remove the deposit by gargle, spray douche, or syringe; employing lime-water as the medium. Forcible removal of the deposit is not regarded as judicious.

When the larynx is invaded Dr. Cohen keeps a constant stream of steam in motion directed over the patient's face. Whenever the respiration becomes obstructed, a few pieces of lime about the size of the fist are slacked by the bedside every hour or so, covering the vessel in which they are slacked with a hood of stiff paper, so as to direct the steam and particles of lime toward the mouth of the patient.

The use of emetics is indicated in children to provoke expectoration from the air-passages in the act of vomiting; but the same indication does not occur in adults who are able to expectorate voluntarily. If successful, the emetic may be repeated at intervals of six hours, as long as the indications continue to recur. Alum, ipecac, and turpeth mineral are the most reliable agents, and may be tried in the order named; adhering to the alum if it prove efficient. Emesis should not be carried too far, or be repeated if ineffectual, as it exhausts the power of the system without any compensation in the discharge of morbid products.

Should asphyxia be threatened from accumulations in the larynx or trachea, tracheotomy is indicated, and, though most frequently unsuccessful in averting death, it facilitates due access of atmospheric air to the lungs, and often saves lives that would otherwise be lost. The most careful attention is required after tracheotomy to keep the artificial passage clear. The stimulating treatment and the lime inhalations should not be discontinued. The two main indications for favorable prognosis after tracheotomy are desire for food and ability to expectorate. All treatment should be subservient to facilitating these great ends.

BARTHOLOW believes that there are two objects to be kept in view in the treatment of diphtheria:

1. To modify the course and shorten the duration of the disease; 2. To obviate the tendency to death.

First head.—The application of topical agents to the fauces and the administration of internal remedies according to symptoms.

He entirely disapproves of caustic and acid applications as inviting the disease to the adjacent portions of the mucous membrane by destroying the epithelium. He does not think much of the value of benzoate of sodium. The application of sulphur, in the form of powder, by insufflation or by blowing it over the whole diseased surface as far as it can be reached, he believes to be good treatment. He regards lime-water and lactic acid as of value as solvents. Some pieces of freshly burned lime are put in water, and the patient directed to breathe the vapor as it rises, or a solution of lactic acid strong enough to taste distinctly sour is freely applied to the throat by a large mop. He places no value in the use of chloride of potassium or tincture of the chloride of iron as faucial remedies. When gangrenous sloughs are thrown off from the throat, carbolic acid is indicated, a one per cent. solution—not stronger than one per cent. This solution may be applied either by mop or syringe. When the exudation extends into the nares the spray of a one per cent. solution of carbolic acid is gently thrown into them and kept up until the two canals are pervious, thus preventing the extension and decomposition of morbid materials and the consequent swelling of the deep cervical glands and possible development of septicæmia. It is only when the exudation extends into the nares that much good can be accomplished by topical applications—so thinks Dr. Bartholow.

Second head.—The prevention of the diffusion of the morbid agent, of the development of septicæmia and of failure of the heart.—With the earliest appearance of an exudation in the fauces, from two to ten grains of the bromide of ammonium are given every three hours. It is believed that the diffusion of this agent through the mucous membrane of the respiratory organs, and so out of the mouth, detaches the exudation. To prevent septic decomposition he advises the use of a drop or two of Lugol's solution in water every hour or two.

This drug is to be given when the exudation is fully developed and spreading. He uses alcohol steadily, pushing it in large doses as an antiseptic agent. Quinia is also considered valuable in this same connection. Dr. Bartholow does not believe in the extraordinary powers of chlorate of potassium in this disease, as claimed by many. He fears its injurious effects on the kidneys.

As food, milk, egg-nog and beef-tea are given freely about every three hours.

ABRAHAM JACOBI sums up the treatment as follows: Every case should be treated on general principles with symptomatics, roborants, stimulants, fébrifuges, externally, internally, or hypodermically.

The uncertainty of the termination and the frequency of collapse, or sepsis, prohibit procrastination. Waiting long means often waiting too long. Alcohol is a very important adjuvant and remedy.

The dose must often be apparently large, from two to twelve ounces daily, according to the circumstances.

Depletion is absolutely contra-indicated. Debilitating complications, such as diarrhœa, must be stopped instantly. Stomatitis, chronic pharyngitis, hypertrophy of the tonsils, glandular enlargements, must be relieved or removed preventively. Acute catarrh of the mouth and pharynx requires the use of potassium or sodium chlorate, in doses not exceeding a scruple daily for a child of a year, one to two drachms for an adult. The single doses must be small and very frequent—every hour, half, or quarter hour. Large doses are dangerous, result often in nephritis, and have proved fatal.

The main indication in local diphtheria is local disinfection. To disinfect the blood effectively we have no means. Salicylic acid changes into a salicylate which is no longer a disinfectant. The amounts of disinfectants required to destroy bacteria are so great that the living body could not endure them. But the discipline of the house, school, and social intercourse can be so modified as to prevent the spreading of an epidemic. The inhalation of steam is very useful in catarrh of the respiratory organs, and also in inflammatory and diphtheritic affections. In fibrinous and tracheobronchitis it has proved quite successful. But it may also prove dangerous by excluding oxygen and overheating the room or tent. Drinking large quantities of water, with or without stimulants, also excites action of the muciparous glands and aids in macerating membranes. The internal use of ice, and its local applications to the affected parts can be very useful. But the cases must be selected for each and any of the remedial agents and applications. The use of baths and the cold and hot pack is controlled by general indications. The usefulness of lime and water lactic acid has been greatly overestimated. Glycerine is a valuable adjuvant, both internally and externally, but nothing more. Turpentine inhalations are deserving of further trials, though they are more effective.

in purely inflammatory than in diphtheric processes. Inhalations of chloride of ammonium act favorably in catarrhal and inflammatory conditions, and deserve a trial for the purpose of aiding maceration of membranes. Mercurials are contra-indicated in the septic and gangrenous forms of diphtheria, but in those which assume the purely inflammatory character, with less constitutional debility and collapse, as in sporadic croup or in fibrinous tracheo-bronchitis, some reliable clinicians claim good results. Astringents, such as alum, do not work favorably. Chloride of iron is among the most reliable of antiseptic and astringent agents. Small doses at long intervals are quite useless. Moderate doses frequently repeated have a satisfactory general and local effect. A child of a year must take at least a drachm daily; a child of three or four years, from two to three drachms. The same or larger doses for an adult. The chloride is to be mixed with water and glycerine in various proportions, so that a dose is taken every hour, every half-hour, every ten minutes. Thus the local applications to the throat become almost superfluous. Potassium or sodium chlorate, half a drachm daily may be added with advantage. Carbolic acid is useful both in local and internal administrations, according to the end to be reached, it may be used either in concentrated form or in a one per cent. solution internally, in doses of a few grains to half a drachm daily, salicylic acid acts as a caustic when concentrated; in moderate solutions it destroys fetor; salicylates are anti-febrile only. The anti-febrile effects of quinia are not so favorable in infectious as in inflammatory fevers; its antiseptic action is not satisfactory in practice. Deliquescent caustics are dangerous. Injury of the healthy mucous membrane must be avoided. Mineral acids, and particularly carbolic acid, when their application can be limited to the desired locality, are preferable. Bromide, both internally and externally, is warmly recommended by Wm. H. Thompson. Boric acid, in concentrated and milder solutions, has been recommended as a local application to membranous deposits generally, and to the diphtheritic conjunctiva in particular. Membranes must not be torn off, and not removed unless they are nearly detached. Caustics are contra-indicated, except where their application can be limited to the diseased surface. No healthy part must be torn. Swelled lymph glands require ice, iodine, iodoform mercury, poultices, incision, carbolic acid, according to circumstances, and at all events frequent and careful disinfection of the mucous membrane from which their irritation originates. Diphtheria of the nose is apt to be fatal unless careful treatment is commenced at once. It consists of persistent disinfection of the nares and pharynx by injections. The tendency to sepsis forbids a long intermission of them. They must be continued day and night, for one to several days, no matter whether the glandular swelling be considerable or not. Laryngeal diphtheria proves fatal

in almost every case, unless tracheotomy be performed. It is less successful the more the epidemic or case bears a septic character. Emetics are useful for the removal of the half-detached membranes. Diphtheritic paralysis requires good and careful feeding—iron, strychnia, the faradic or galvanic current, friction, hot bathing. Urgent cases indicate the hypodermic administration of strychnia. Diphtheritic conjunctivitis is benefited by ice and boracic acid; cutaneous diphtheria by local cauterization and disinfection, besides general treatment.

C. E. BILLINGTON recommends the following prescriptions: *No. 1.—Iron and Glycerine Mixture.* B. Tinct. ferri chloridi, f ʒ j; glycerinæ, aquæ, aa f ʒ j. M. Sig. A teaspoonful of this and of No. 2, alternately, every half-hour through the day. *No. 2.—Chlorate of Potassium Mixture.* R. Potassi chlorate, ʒ ss.; glycerinæ, f ʒ ss.; aquæ calcis f ʒ ijss. M. Sig. A teaspoonful of this and of No. 1, alternately, every half-hour through the day. *No. 3.—Spray Mixture.* B. Acid. carbol., mxv.; aquæ calcis, f ʒ vj. M. Sig. To be used with a small hand atomizer. The patient is allowed to sleep for an hour or two at a time at night. When awake, doses of Nos. 1 and 2 are alternated every half-hour. The throat is sprayed with No. 3 for several minutes at a time, whenever Nos. 1 and 2 are given. In spraying, the mouth is opened widely.

Where there is nasal implications the nose is thoroughly syringed out with warm or tepid salt water, once, twice, or three times a day. This syringing is done with the patient's head inclined forward; a two-ounce hard-rubber ear syringe is used.

Dr. Billington never applies any brush or swab to the throat. He sometimes throws a drachm of No. 1, with a syringe, directly against the affected surface in the throat. He does not give quinia or any other unpleasant medicine to children. He does not give alcoholic stimulants except where a child, who cannot be induced to take other nourishment, will take weak milk-punch or egg-nog.

The patient is nourished with an abundance of cold milk, given frequently, to which a little lime-water is often advantageously added. When the stage of extreme exhaustion has been reached in bad cases the juice squeezed from beefsteak is given.

THE ADMINISTRATION OF QUININE.

In the *London Practitioner*, Dr. David Young enunciates the following:

1. Never to give quinine in antipyretic doses in cases where the bowels are confined and the secretion of urine is scanty.

2. In cases where it is being administered, and an increase of dose is desirable, this may be safely done if the skin, bowels, and kidneys maintain their normal functional activity.

3. In many cases of remittent and intermittent fevers, the combination of the drug with chloride of ammonium or a salt of potash or soda is likely to be more easily tolerated, as well as more useful, than if it be administered in a pure form.

4. During the administration of quinine, should a headache come on or increase in intensity, the case requires the most careful attention.

NERVOUS DYSPEPSIA.

In persons of a nervous temperament, especially excitable women, we will frequently meet with a form of dyspepsia, not amenable to ordinary treatment. We recently had a case, in a woman, caused evidently by mental worry, in which there was great depression of spirits, a globus hystericus and a great oppression, with constant and violent eructations of wind, always greatly aggravated by eating. Antacids, pepsin, and a host of routine remedies, were useless; she was then ordered tincture of valerian and bromide of potash in small doses (ten drops of the former and two grains of the latter) every hour. The dyspepsia and nervous irritability commenced to yield after the second dose, and soon disappeared.

THE POISON OF RHEUMATIC FEVER.

Quite a lengthy article on this subject by Dr. David Thompson thus concludes in the *Lancet*, December 29, 1883:

"I am inclined to conclude that the poison of rheumatic fever is derived from without; that, though it arises under circumstances incompatible with the belief that it can be of malarious origin, as usually understood, yet it is not improbable that it may be a terrestrial aeriform emanation. And we have ample reason to show that, whatever be the nature of the poison, salicine and its compounds exercise such a beneficial action over it as to entitle them to be called specifics. Nor is the method employed by some, of giving it with a half belief in its efficacy, in small doses, of any utility; indeed, it is worse than not using it at all, for while it affords no relief to the sufferer, it at the same times brings discredit upon a remedy of great value."

A CAUTION ABOUT BELLADONNA PLASTERS.

One would hardly suppose that serious results could ensue from the application of a belladonna plaster, yet Dr. Martin J. Fleming reports a case of well-marked belladonna poisoning, relieved by opium treatment, in the *Medical Record*, January 19, 1884, caused by the application of a plaster to a back that had been somewhat denuded by the use of an irritating liniment. The case suggests the advisability of cautioning patients against applying such plasters over an abraded skin surface.

A NEW HAIR-DYE.

The disadvantages attending the use of hair-dyes containing lead, and the positive danger attending their use, have induced M. Naquet to search for a liquid which may be used for dyeing the hair and yet be innocuous. He describes, in the *Moniteur Scientifique* a dye which is said to have a progressive action, to produce all shades up to a deep chestnut-color, and yet to be free from all deleterious action. The base of the dye is bismuth. The following is the formula. Bismuth is dissolved in the smallest possible quantity of nitric acid—nearly three parts—and to this liquor a solution in water of tartaric acid, equal in weight to one-fourth of the bismuth used, is added, and then a large quantity of water, so as to insure thorough precipitation of the bismuth. The precipitate is filtered off, and washed with water until the washings have lost all acidity. The precipitate is dissolved in a solution of ammonia; and for this rather more than a fluid ounce of solution of ammonia will be required for each ounce of bismuth used. Hyposulphite of soda—three fourths of the weight of the bismuth employed—is then added, and, when the salt is dissolved, the mixture is filtered, and preserved in well-closed bottles. The dye should contain about one twentieth of its weight of bismuth. Such a mixture is said to form an admirable dye, which loses ammonia on exposure to air, and deposits sulphide of bismuth.—*British Medical Journal*.

THE ABSORPTIVE POWER OF THE SKIN.

Since drugs are frequently used by inunction, it will be interesting to read that from experiments made with salicylic acid, salicylate of sodium, and tincture of iodine, applied to the skin as simple solutions or in the form of spray and with mercurial ointment, Dr. Ritten (*Deutsch. Archiv. fur Klin. Med.*, p. 143, vol. xxxiv.) comes to the conclusion that the normal skin has not the power of absorbing these substances, either in a fluid condition or in the form of ointment or of spray, but that all substances which irritate the skin may produce, when sufficiently vigorously applied, a solution of continuity, and may then be absorbed from the altered skin.

INJECTIONS OF ETHER FOR SEBACEOUS CYSTS

Make the tumor tense by pressure and inject by a Pravaz syringe 5-10 drops of ether into the largest aperture noticed. Repeat every second day until inflammation is set up. Then puncture the base of the tumor, when pus will escape, followed by broken-down sebaceous matter, and the tumor is cured. This is the treatment recommended by M. Vidal in *Bull. Gen. de Therap.* November 30, 1883.

A NEW USE FOR APOMORPHIA.

This valuable emetic has proved serviceable in two cases of hystero-epilepsy reported by Dr. T. Hammond Williams in the *Med. Times and Gaz.*, December 8, 1883. In the one case the attacks were probably due to suppression of menses, in the other their etiology was obscure. In both, however, they diminished in intensity and ultimately disappeared under the hypodermic use of apomorphia in doses of one-fifteenth of a grain.

THE CANADA MEDICAL RECORD.

A Monthly Journal of Medicine and Surgery.

EDITORS :

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THE ANATOMICAL ACT.

The Montreal *Herald*, since it has passed under new management, has shown a large increase of vitality, and much of its editorial work exhibits sound judgement and much practical good sense. We regret, however, to notice that on the subject of the present Anatomical Act it has, as a Scotchman would say, run wud—that is, mad. Several times during the winter it has had small editorials denouncing the Act in severe terms; but a short time ago it came out with a series of articles in the same issue in which the Act was depicted in a light more horrible than true, and calling on the Legislature to repeal it without delay. Now we desire to make an attempt to place our *confrere* right, or at least understand the position of matters. As the editor-in-chief of the *Herald* has only become but recently a resident of our City, and comes from a section of the Dominion where medical students and their wants are unknown, it is just possible that he does not fully comprehend the situation. First, we may say, that the day has gone past when it is necessary to argue the necessity for medical men having material upon which to learn the anatomy of the human body. That is now

an admitted fact. Such being the case, the only question that remains is how this material is to be obtained. In many countries where medical education is given, provision is now made whereby the bodies of persons dying in institutions receiving Government aid shall be handed over to the medical schools, unless claimed by relatives, the rule being not beyond a third cousin. This law has been found to work well as a rule in all large centres, and ample material has been forthcoming. In our own Province of Quebec such a law has been for a number of years on our Statute book, but it was, strange to say, practically a dead letter. There was no penal clause by which the Act could be enforced, so that, so far as we know, only one institution obeyed. What was the result? Simply this, that graveyards were desecrated, vaults were broken open, and scarcely a week passed that the newspapers did not chronicle the terrible doings of the grave desecrators. The feelings of the public were aroused, and those who had relatives die, watched their graves; still, in spite of all—in spite of men being sometimes arrested in the very act or from information obtained—body-snatching went on. The medical schools, generally speaking, received a good supply of material, but it was at the expense of the feelings of many, who discovered, perhaps when too late for recognition, that the graves of those they loved had been desecrated. So long as demand existed, in spite of all that was done to prevent it, the supply was obtained year after year. All that was required to make body-snatching a thing of the past was to grant a legitimate supply, and attach to the reception of a stolen body a heavy penalty. To accomplish this the Quebec Act, already in existence for many years, required only the attachment of a clause, by which a penalty could be enforced against any institution in the Province refusing to give up unclaimed bodies, and to heavily fine any college using bodies not coming to them as the result of the operation of the Act. These clauses were attached, and the result has been that during the entire winter not a grave has been disturbed. We believe we are equally correct in saying that the Act has been enforced without the feelings of a single individual, distant relative or friend, having been hurt. Coming, as bodies have, from various portions of the Province, a sufficient number and more has been obtained of those absolutely without friends of any kind—so that when a person died who legitimately came within the provisions of the

Act, and yet had friends or distant relatives who claimed the body, no difficulty was put in the way of their obtaining it. Such being the history of the working of the Act, we fail to see with what reason our friend, the editor of the *Herald*, should try and arouse public sentiment against it: He simply writes sentimentally; he offers no method that is better. If the public desire good surgeons and physicians these men must learn their anatomy. This can only be done by dissection of the human body. Shall these bodies be obtained legitimately or illegitimately?—that, practically, is the only question. So far as the medical schools are concerned it matters little, only so far indeed as those connected with them desire, as we know they do, that, when a body is deposited in the grave by friends, it should be allowed to remain there. If the public, forgetting this most important fact, should so influence legislation as to withdraw the present Act, what would be the result? The supply would not be cut off. Body-snatching would once more be of constant occurrence, and a sense of insecurity would pervade all classes, with regard to the possible disposition of the bodies of their friends. The necessity of human dissection is recognized. We believe that in this Province we have provided for its being done with the minimum amount of outrage to the better feelings of our nature.

INCREASE OF YELLOW FEVER AT PANAMA.

Further private advices from Dr. Wolfred Nelson of Panama report ten cases of yellow fever in December, 1883, with six deaths. The S.S. *Lima*, of the Pacific Steam Navigation Company cleared from Panama in that month for Callao, Peru. A few days out from Panama, yellow fever appeared on board. A number of her passengers had been waiting for her for nearly ten days in Panama. Ere the steamer reached Callao (eight days from Panama) one died, and several sickened. At Callao she was quarantined. Cases were isolated on board; two more died. Later on no new cases appeared, she was admitted to pratique. Her passengers doubtless received the germs of this disease in Panama. Fourteen fatal cases were reported in Panama in January of this year. Three fatal cases were reported on the line of the Panama Railroad for that month as

well. Up to the date of his letter, February 11th, nine cases and six deaths were reported. As usual the cases were among new-comers. Such is our information. In closing he tritely observes: "This is supposed to be the healthiest season of the year and so it is, it being the dry season. If things go on from bad to worse, while things 'are healthy,' as the increasing death-rate proves, what the change of season in April and May—from dry to wet—has in store for us is not pleasant to contemplate. Our forecast in October last of a possible epidemic in 1884 is now assuming tangible shape. Colon, on the Atlantic, is filthy and overcrowded, Panama, on the Pacific, is the same. Filth unmentionable is thrown into the streets in both cities. There is an abundance of suitable material for the disease to feed on in the hundreds of new-comers and unacclimated people. The disease has been endemic for years, as I shall fully prove in the near future.

THE POPULAR SCIENCE MONTHLY FOR APRIL, 1884.

This is an especially strong, varied, and valuable number. The opening paper is by Herbert Spencer on a subject of great public moment—the decay of the sentiment of personal liberty, and the rapid growth of the system of legislative interference and coercion—which he discusses under the title "The Coming Slavery." Our politicians should give attention to the striking facts and startling conclusions of this masterly paper. "A Defense of Modern Thought," by W. D. La Sœur is a vigorous reply to the Bishop of Ontario on "Agnosticism," and an instructive statement of the position of modern thinkers. There is another most excellent and practical chapter of W. Mattieu Williams's "Chemistry of Cookery," in which butter and other fats and milk are treated; and Dr. Oswald concludes in this number his lively series on "The Remedies of Nature." The illustrated articles are, "Photographing a Streak of Lightning," by Gaston Tissandier; "Why the Eyes of Animals Shine in the Dark," by Swan M. Burnett, M.D.; and "The Electric Railway," by Lieutenant B. A. Fiske, U. S. N., in which is told just what every one wants to know about this coming mode of transportation.

New York: D. Appleton & Company. Fifty cents per number, \$5 per year.

THE U. S. PHARMACOPIA.

Any person having purchased a copy of the U. S. Pharmacopœia of 1830 and desiring a list of the corrections since made therein, can procure the same by sending a two cent stamp to Wm. Wood & Co., Publishers, 56 and 58 Lafayette Place, New York.

REVIEWS.

HEALTH AND HOME: A Journal of Sanitary Science and Home Hygiene.

We have received the first numbers of this new Journal, edited by F. N. Boxer, Civil and Sanitary Engineer. It is the official organ of the Canadian Sanitary Association, and presents a very neat appearance. This new journal has a wide field into which it may extend its usefulness, for sanitary matters are little understood, and still less appreciated by the mass of our population. Its Editor has an excellent record as a member of the Montreal Board of Health, and is well qualified for the position he occupies.

PERSONAL.

Dr. Wm. Young (C.M., M.D. Bishop's College 1878) has resigned the chair of Chemistry in the Medical Faculty of Bishop's College, and leaves early in April for Hong Kong, China. Dr. Young after his graduation went to Hong Kong, where he entered into practice with his brother, a prominent practitioner of that city. He remained there till the winter of 1883, when ill health caused him to return to Canada. His many friends induced him to remain here, and his old teachers offered him the chair of Chemistry in his *Alma Mater*, which he accepted. He was rapidly getting into an excellent practice, and his success as a teacher was very marked. In the meantime his brother desired to retire from practice, and offered him the opportunity of becoming his successor. The practice being one of the largest in Hong Kong, the opportunity was too tempting to be refused, and Dr. Young decided to accept it. All who have had the pleasure of Dr. Young's acquaintance, will regret his departure, not only for his warm and genial character, but because they believe that, before very long, he would have come to the front, and become one of Montreal's leading Medical men. We believe, however, that if his health is spared for a few years it is his intention to again return here.

His Class of Chemistry at the close of the course presented him with an illuminated address, and the Medical Faculty of Bishop's College, entertained him at a dinner given at the St. Lawrence Hall. We extend our heartiest good wishes for Dr. Young's success.

Dr. Osler, Registrar of McGill College, Faculty of Medicine, accompanied by Dr. Gerald Howard, Assistant Demonstrator of Anatomy in McGill College, started from New York in the *Fulda* for Antwerp on Wednesday, the 25th inst. They intend spending some time in Germany.

Mr. H. R. Gray, the well-known chemist of Montreal, was, at the late Municipal elections, elected an alderman for St. Lawrence Ward by a very large majority. We believe Mr. Gray is a decided acquisition to the City Council, and we congratulate him on this mark of the esteem in which he is held.

Dr. Henry Howard, of Montreal, Inspector of the Longue Pointe Lunatic Asylum, has had a well-deserved compliment paid him. He has been asked to contribute a paper and act as referee on the subject "The Influence of Forestry on Climate and Health" at the meeting of the American Forestry Congress, which meets at Washington in May.

CORRESPONDENCE.

To the Editors of the CANADA MEDICAL RECORD.

SIRS,—Will you please be good enough to mention in your Medical journal the following:—The College P. & S. P. Q. has had judgment in its favor, at the last term of the Circuit Court, in Portage du Fort against Jas. D. Stewart, of Belleville, Ont., for illegal practice of medicine in the Province of Quebec. An unlicensed midwife by the name of Adeline Rivet, wife of A. Lafortune, of l'Assomption, has paid a fine, without costs, before the taking of the action against her, and promised to retire from practice. Thomas Ward, charlatan, of Notre Dame du Richelieu, has paid a fine, without costs, before the taking of the second action against him, and will be prosecuted again if he continues to practice. An action has been taken for the second time, on the 18th February last, against a charlatan of the name of Frs. X. Destrempe, of St. Cuthbert. The case will go on between the 10th to 15th April next, at Joliette.

I remain, yours respectfully,

C. E. de LAMIRANDE,
Detective Officer.

March 3rd, 1884.