

be single or multiple, cutaneous or subcutaneous, arterial venous or mixed. If it was in the human family *only* that these abnormalities occurred we might be inclined to attach more importance to this prevalent idea, but they are of as frequent occurrence if indeed not more frequent in the lower order of animals, especially in the domestic animals, such as the horse, the cow, the dog, the hog, the cat, etc. When they occur in these animals they are the counterpart of what we see in the human subject. They are not infrequent in the feathered tribe, also.

It is true, the animals above enumerated are gifted with wonderful instincts, but it is hardly reasonable to suppose that they possess a sufficient degree of intellectuality to be influenced by such sights or objects as is claimed make these maternal impressions upon the mind of the pregnant woman.

In early embryotic life in case the amnion is not lifted from the newly forming skin of the embryo, in consequence of an insufficient secretion of amniotic fluid adhesions form between the body of the fœtus and amnion, and as the amniotic cavity becomes distended the adhesive material stretches and forms bands of greater or less length and thickness. "These adhesions frequently prevent the proper arching over and closure of the body cavities, producing such deformities as *eventration*, *anencephalus*, etc.

Moreover, a developing limb, as an arm or leg, or a hand or foot, may be caught between two of these bands, or may be encircled by one, and as it grows be so constricted as to produce an amputation. The amputated portion of the limb being in the embryotic stage of development is soon dissolved by the amniotic fluid—or it may be accomplished by the limb being encircled by the umbilical cord. Amputations in-utero occur in this way, and not as a result or consequence of "maternal impressions," as some believe.

In conclusion, I would say that various causes have been assigned for the production of these abnormalities. Some physiologists are inclined to the opinion that the germ is imperfectly formed prior to impregnation. Others that they may result from an undue admixture of protoplasmic material at the moment of fecundation. Other causes also, it is thought, may operate, such as the rapid and active growth which develops from a single cell—in the short space of nine months—one of the most intricate, complicated, complex and mysterious beings in all the animal creation. When we remember that the most important vital functions of this being are performed during its development by an organ itself *without* the foetal body, and subject to diseases and accidents, and when we consider that the fœtus is essentially a parasitic being, liable to become diseased and development arrested by some systemic disease of its host. And again, that these results may be

brought about by some taint or vice handed down from somewhere along its long line of ancestry, even from "Ghostly hands from graves." I repeat, when we take all these things into consideration—and many more which could be mentioned—and then remember that hundreds, if not thousands of children are born every hour, may we not rather be surprised at the comparatively few abnormalities we meet with. And may we not rationally conclude *that there are causes* enough operating to account for their occasional occurrence—which appear more rational and more in harmony with the laws of cause and effect—than to attribute them to the intellectual acts or mental impressions of the pregnant woman. For it is well known that these so-called "maternal impressions" exist to a greater or less extent in the minds of a large majority of pregnant women without producing any visible effects whatever upon the child.

CONSTITUTIONAL TREATMENT OF ACUTE CATARRH OF THE UPPER AIR PASSAGES.

*Read before the American Rhinological Association at Cincinnati,
September 13, 1888.*

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Acute catarrh or cold of the "upper air passages" might truly be called a "freshet" or "overflow" of the watery and other constituents of the blood, into the mucous and submucous connective tissue. To successfully treat this disease, there are three indications, viz.: first, to arrest it in the first stage, or prevent this overflow and injury to the normal tissue; second, should the disease have passed into the second stage, drain out and deplete the engorged and inflamed tissue and arrest inflammation; third, repair the damage to the affected tissue by the disease having passed into the third stage, and not allow it to end in chronic catarrh, but resolution.

Constitutional Treatment.—Bromide of potassium diminishes reflex irritability and cutaneous sensibility, and depresses the activity of the spinal cord and the medulla, and has its appropriate place in the first and second stages of acute catarrh. The iodide of potash acts specifically on the mucous lining of the eyes, nose, frontal and ethmoidal sinuses, mouth and salivary glands; 3 to 10 grs. taken at bedtime will often cut short a cold in the upper respiratory tract, and is indicated in the first and second stages. Combined with 20 or 30 grs. of the bromide its action is increased; in addition, there is the anodyne effect of the latter.

"Inhaled or taken by the stomach camphor exerts a decided influence on cold in the head." Employed at the beginning of an attack (it is useless after the first stage), camphor sometimes arrests a cold, and failing in this it abates its vio-

lence, obviating or diminishing frontal headache, restlessness, sneezing and running at the nose. ("Inhalations or sprays of spts. of camphor locally, in weak solutions, assists the internal administration." Ringer.) The same may be said of menthol in weak solutions, or the pencil applied to lips, tongue and nares.

The hot foot-bath, given in ordinary colds by patient sitting on the side of the bed in a warm room, with a blanket enveloping both patient and tub, for fifteen to thirty minutes, keeping the temperature of the water 95° to 100° F., and then remove feet wrapped in the blanket without drying, causes a free perspiration, and allays irritation of the air passages and restores the skin to its normal function.

Should an acute catarrh or "cold" be very violent, the patient should be placed in bed between two blankets with sufficient cover, and have placed between the blankets a tub of as hot water as can be tolerated, in which the feet should be immersed from twenty minutes to one hour, and tub then removed. Every five minutes a cup of hot water should be added to maintain the high temperature of the bath. The good effects of both a foot and vapor bath are obtained. The patient sweats copiously, and should remain carefully wrapped until the perspiration subsides, the clothing and skin are dry; then the body should be massaged and anointed with vaseline once or twice every twenty-four hours for one or more days, if necessary. The function of the skin being arrested in acute catarrh, the inunction and massage cleanses the skin, invigorates the body, and fortifies the system against future invasions of acute inflammation of the upper air passages. If essential, the hot foot and vapor bath may be given every six or ten hours. A cup of strong hot coffee or tea, or even hot water taken, aid the diaphoresis; the former also acting as a fine diuretic. A hot lemonade or Dovers powder will also increase or continue the diaphoresis for some time after the tub is removed. If a cold is neglected it ends in chronic catarrh, or the subacute. Every cold weakens the system to a certain extent, and makes the patient more susceptible to future attacks unless properly treated, therefore abort or arrest an acute catarrh at once. ("At the commencement of a feverish cold a Turkish bath will cut the attack short, remove the aching pains and relieve the hoarseness at once. The Turkish bath will relieve or carry off the remains of a severe cold, as hoarseness, cough with expectoration and lassitude." Ringer.) In mild attacks of acute catarrh, anointing the integument with vaseline, and the free use of massage once or twice in twenty-four hours for one or more days, will abort an attack and assist the other medicines in accomplishing the same result.

Opium and its preparations check the secretions from all mucous membranes, and no doubt have a

specific effect in checking the acute inflammations and secretions of the upper air passages, and by allaying pain and cutaneous irritation and its diaphoretic action makes it or some of its preparations a valuable, if not the most valuable, drug that can be given in any stage of acute catarrh, more especially in the first and second stages. Opium should be given in $\frac{1}{4}$, $\frac{1}{2}$, or 1 gr. doses, and repeated every one, three or six hours, *pro re nata*. The various preparations should be given in small doses and repeated at the above intervals. It is often essential to combine quinine or belladonna with opium, one or both; the former in 2 to 5 gr. doses; the tincture of belladonna, gtt. iv-xv; extract, $\frac{1}{8}$ to $\frac{1}{2}$ gr., given at the same intervals as opium. When Dovers powder is given the bromide of potash should be substituted for the sulphate. Muriate of pilocarpine, gr. $\frac{1}{4}$ to $\frac{1}{4}$, will aid very materially the diaphoretic action of opium and arrest congestion of the respiratory tract. In the first stages of acute catarrh, nitrite of amyl or "glonoin" will often abort or arrest the disease. The most characteristic effect of this drug is its influence on the vascular system. It relaxes the whole arterial system and greatly reduces arterial pressure. The reduction of arterial pressure is due mainly to the great dilatation of the arterioles and, after large doses, to depression of the heart. Though it dilates the arterioles, they remain so a much shorter time than the arteries, and when the following symptoms are present in the first and second stages, viz.: chilliness, headache, lassitude, dryness of skin, cold feet, sneezing and photophobia, pain in the nasopharyngeal chambers, nitrite of amyl does good by flushing the integument and increasing the heat and perspiration of the head, face and neck; sometimes the increased warmth and perspiration affects the entire skin. Its effect is possibly due to its effect on the vaso-motor nerve trunks or on the muscular coats of the arterioles. In catarrhal, as in other inflammations, there is partial or complete paresis of the vaso-motor constrictors. The nitrite of amyl does not increase the paralysis of the constrictors of the vessels, but dilates the arteries and arterioles and allows circulation of the blood to be increased in other parts of the body, thereby equalizing the circulation and arresting inflammation. Trinitrine tabloids are preferable to the nitrite of amyl. The physiological effects of the former are continued a much longer time than the latter, and four to six doses, three to six hours apart, in twenty-four hours, maintain the physiological effects. Quinine is partly eliminated by the skin and respiratory membrane, and it arrests the amœboid and allied movements of the white corpuscles and is supposed to control inflammation by its destructive influence on the movements of the white corpuscles, and in the first and second stages of acute catarrhal inflammation will cut short an attack. Its action is

much increased by combining it with opium, belladonna or aconite. Quinine, by arresting the transmigration of the white corpuscles, prevents the formation of the pus corpuscles, and should be continued through the third stage of acute catarrh until resolution is complete. It is antiseptic, and in small quantities destroys septic germs, arrests putrefaction, renders the secretions aseptic, and is a valuable local application in the first, second and third stages of acute catarrhal inflammation of the upper air passages. A powder composed of quinine sulph., grs. ij; bismuth subnit., grs. ij; morphine sulph., gr. $\frac{1}{8}$; cocaine muriat., gr. $\frac{1}{8}$ to $\frac{1}{4}$, well triturated and blown into each nostril two or three times in 24 hours, will abort or arrest a cold quickly in the first and second stages and shorten the duration of the third stage.

Belladonna is one of the most efficient drugs that is used in the treatment of acute inflammations of the "upper air passages," and, given internally or locally, checks and even suppresses the secretions of the mucous glands and follicles.

"One of the centres of the sympathetic nervous system—the spheno-palatine ganglion—supplies branches to the lining membrane of the nose, throat, soft palate and Eustachian tube. It possesses a sensory, a motor and a sympathetic root. It is connected with the pneumogastric and facial nerves, and through its numerous connections an intimate sympathetic relation is established between the nose, throat, ear, larynx and bronchial tubes. Removal of this ganglion causes a severe catarrhal condition of the nasal mucous membrane. This membrane is continuous with that which lines the nasal duct and eyelids, the throat, Eustachian tube, middle ear, larynx, trachea and bronchial tubes. A congestion started in one portion of this membrane may extend to other parts." In acute catarrh there is, doubtless, a paresis of the spheno-palatine ganglion and other vaso-motor nerve centres. Belladonna acts specifically upon these centres which supply the glands and follicles of the mucous membrane. It not only arrests the normal supply of blood, but also an excess of blood to the inflamed tissues, and, by dilating the arterioles and arteries in other parts of the body, causes a determination of blood from the tissues involved, arresting inflammation, aborting the first and second stages of catarrh, and lessening the duration of the third. The physiological action of belladonna and its alkaloids is to cause a dryness of the Schneiderian membrane, pharynx, palate, tongue, larynx and trachea. In the second and third stages of acute catarrh this is a great desideratum. The effects of belladonna and its preparations are much increased by opium. Dose of the tincture of belladonna is grs. viij to xv for first dose, then gtts. iv to viij, repeated every two, four or six hours *pro re nata*.

"The power of aconite to control inflammation

and subdue the accompanying fever is remarkable. It will sometimes cut short an inflammation but will not remove its products, though by lessening inflammation it will prevent their formation, so saving the tissues from further injury." It is, therefore, in the early stages of inflammation more conspicuously serviceable, as in the first and second stages of acute catarrhal inflammation of the upper respiratory tract. "Aconite diminishes both the sensibility of the terminal ends of the nerves supplying the mucous membrane and the skin also. Moderate doses lower the pulse and respiration by its influence on the muscular substance of the heart or on the contained ganglia, and on the respiratory centres." Aconite increases the flow of blood to the skin, rendering a dry skin moist and perspiring; in this way heat is lost by radiation and evaporation. Fothergill states, aconite dilates the arterioles and greatly increases the capacity of the vascular system, and by this means drains the blood away from the inflamed organ; in fact, this drug bleeds the patient into his own vessels. As the vessels are already paralyzed leading to an inflamed organ, aconite does not augment the supply of blood to it.

In the first stage of acute catarrh, when rigors, a dry hot skin, dry mouth, tongue and nares, headache, pain in throat or nasal region, restlessness, lassitude, aching pains and stiffness, and photophobia exist, the quickened pulse and respiration become less frequent, and the temperature lowered, by the use of aconite in from six to forty-eight hours, and remain normal; in a few hours the skin becomes moist, and followed in a short time by free perspiration. On rhinoscopic and laryngoscopic examination it will be observed that the local manifestations of acute catarrhal inflammation will have subsided as magically as the constitutional.

How should aconite be given to have the desired effect? It must be given at the inception of the disease; every hour delayed is so much valuable time lost, as the malady will soon pass from the first to the second stage, or from the latter into the third. Half to one drop of the tincture should be given every ten minutes for two hours, in a teaspoonful of water, then hourly; or two or three drops every half to one hour for two hours, then every two or four hours. When there is a weak pulse and much prostration small doses must be given at longer intervals. Ringer states that in the treatment of inflammations the thermometer and aconite should go hand in hand. No acute inflammation can exist without preternatural heat. If the temperature is normal aconite is not indicated, otherwise it should be given. When the catarrhal inflammation is quite severe it is better to combine aconite with belladonna, both given in small doses frequently repeated.

In acute catarrh attended with much preter-

natural heat, headache, myalgia or orbital neuralgia, antipyrin in from three to five or ten grain doses, repeated every one or three hours, has proven to be a valuable addition to the physician's armamentarium of drugs.

Cold compresses to the throat when pain exists or deglutition is painful, and changed every hour until pain is relieved, or cloths wrung out of hot water and applied every ten to thirty minutes until pain is relieved are valuable local measures. When a rhinitis, or naso-pharyngitis exists, with orbital neuralgia, headache and photophobia, great relief is given by local applications to temples and forehead of menthol, either with the pencil, or menthol 3j-3ij, ethyl bromide or alcohol 3ij-3iv, made into a solution and painted over the pain. Should a catarrhal laryngitis or trachitis accompany the naso-pharyngitis, menthol applied over larynx and trachea in the first and second stages of inflammation, every four or six hours, or in the third or purulent stage blisters the size of a nickel over the larynx and trachea very materially hasten resolution. Catarrhal patients must be taught by the physician the importance of resorting to constitutional and local measures when a cold supervenes, and to abort it at once and hasten resolution, and the remedies to be used and always kept on hand. The patient when properly educated can abort a cold in from six to twelve hours when treatment is begun in the first stage, and can check it in from two to four days when begun in the second stage, and lessen the duration of the third stage.

Local Treatment of Acute Catarrh, or Cold, of the Upper Respiratory Tract.—Local treatment has three objects in view, viz.: 1st, non-irritation; 2d, thorough cleansing of the diseased surface with sufficient force to remove the morbid secretion; 3d, medication of diseased tissue without irritating or treating healthy tissue.

(In treating locally acute naso-pharyngeal catarrh the old adage, "*ubi irritatio, ibi fluxus*," must be kept in mind by both patient and physician.)

Treatment of the first stage should be as follows, viz.: Spraying the nasal chambers, or these and the throat, with a 2, 4, or 6 per cent. solution of muriate of cocaine, gtt. 10-30, one to three times a day, at intervals of eight hours, or absorbent cotton saturated with it and inserted into the nares and repeated every ten to thirty minutes until the desired effect is produced. Or, a 2, 4, or 6 per cent. mixture of cocaine can be made with vaseline and sprayed, after being warmed and melted, into the upper respiratory passages. Cocaine is an anæsthetic, anodyne, astringent and antiphlogistic. Vaseline is a mild, soothing astringent, antiphlogistic and aseptic, moistens the mucous lining in the first stage of acute inflammation and protects it against further injury. In this stage the mucous secretion is almost, if not en-

tirely, arrested for the time. Bosworth states there is poured out on the nasal mucous membrane in health from twelve to sixteen ounces daily of serum. This normal secretion is not perceived in health, being rapidly vaporized by the to and fro current of respired air. Doubtless there is equally as much secretion from the pharynx, larynx and trachea in health. When these organs are inflamed, in the first stage of acute catarrh, this secretion is arrested, and vaseline supplies its place and is either absorbed or oxidized, anyhow it is non-irritant, soothing and protective. Liquid applications to an acutely inflamed mucous membrane causes it to absorb moisture and the disease becomes aggravated, cocaine used locally will check a cold in from one to three days, and relieves hyperæsthesia, pain and reflex irritability at once. All local applications should be made with vaseline for the base, melted and liquefied, and sprayed while warm. Equal parts of vaseline and glycerine are very effectual in the first stage of catarrhal inflammation.

Very often acute naso-pharyngeal catarrh is attended with a catarrhal laryngitis, or laryngo-trachitis, and of all means that have been invented for making local applications to the air passages, Rumbold's spray-producers, Nos. 1-5, inclusive, for the naso-pharyngeal chambers, and 6-8 inclusive, for the larynx, are the best, excepting, only, Dr. A. DeVilbis', of Toledo, Ohio. His spray-producer, by turning a point, can throw the spray in the same number of directions as the Rumbold instruments. With these spray-producers the medicine can be applied warm, the temperature of the respired air, and directly to the diseased surface, healthy tissue being avoided. Not more than 7-10 lbs. of compressed air should be used to make the spray, more than this will cause irritation and pain. A rhino-laryngoscopic examination should be made before each treatment, to ascertain what part of the respiratory tract requires the most treatment, so that the surface least affected will receive the least treatment, and *vice versa*. Every physician should be able to make a rhino-laryngoscopic examination, and know by inspection the pathological states of diseases affecting the upper air passages. On entering the practice of medicine the young physician should get a laryngoscopic "outfit," and familiarize himself with it, as it will be more frequently resorted to than any other instrument in his office. Rumbold's tongue-depressor is the best as it enables the patient to hold down his tongue and gives the operator the use of both hands.

In the second and third stages of acute catarrh the following medicaments are the best:

R	Vaseline	3j
	Olei eucalypti	gtts iij
	Acidi carbol	grs. ss-iiij
	℥ ft. mass.	
	Sig. melt and spray 3j-3ij.	

- R Vaseline 3ij
 Pino Canadensis (Kennedy's) . . . 3¼ to ss
 Olei eucalypti gtts ij-v
 ℞ ft. mass.
 Sig. melt and spray half to two drachms.
- R Vaseline 3ij
 Glycerine 3ss
 Acidi carbol grs. ss-ij
 ℞ ft. mass.
 Sig. Dose 3ss-3ij.
- R Vaseline 3j
 Iodol grs. v-x
 ℞ ft. mass.
 Sig. Dose 3ss-3ij, melted and sprayed warm.

The indications in the second stage is to check morbid secretion, render the parts aseptic, allay irritation, and absorb the inflammatory products. The treatment of the third stage is a continuation of the second, but since there is a muco-purulent or a purulent secretion, and abrasions from exfoliation of the epithelium exist it behooves the physician to use locally aseptic and antiseptic measures which have protective and rapidly-healing virtues. Mild solutions of nitrate of silver, grs. ij-grs. v, aquæ 3j, dose, ½ to 2 drachms, or weak solutions of bichloride of mercury, 1:5000, or 1:10,000, or tincture of iodine 3ij, glycerine 3ij-3iij, or Listerine 1 part, water 4-8 parts, glycerine 1-3 parts, should be warmed and sprayed to cleanse and medicate the catarrhal inflammation, followed by a vaseline spray. Insufflations of bismuth subnitrate or powdered yellow root grs. x-3ss combined with powdered lycopodium 3ss after vaseline is sprayed, assists in the protection of any erosion and hastens resolution.

THE PATHOLOGY AND DIAGNOSIS OF SO-CALLED PELVIC CELLULITIS, WITH SPECIMENS OF SALPINGITIS.

*Read before the Section for Clinical Medicine, Pathology, and Hygiene
 of the Massachusetts Medical Society, Dec. 12, 1888.*

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Few diseases present a more constant and well-defined group of symptoms, both objective and subjective, than the inflammatory affection of the pelvic contents which is so well known under various names. In few diseases has the proper comprehension of the pathology, as derived from autopsies, been so long obscured by notions supposed to be founded on physical examination; in none has a just realization of the essential nature of the disease been followed by so brilliant and successful surgical measures.

Curiously enough, from early times there have not been wanting accurate descriptions of the diseases of the Fallopian tubes, as found at autopsies, but these were supposed to be affected as a consequence of pelvic inflammation, rather

than as being the essential and causative factor of the latter. It required the surgical genius and success of Tait and Hégear to bring the profession to realize that the diseased and swollen tubes, involved in a mass with ovaries, lymph, and perhaps pus, as described so accurately by Bernutz and Goupil in 1857, are verily the same lumps and "effusions" which we are all continually encountering in pelvic inflammations, and which under the teachings of eminent authority have been supposed to be outside of the cavity of the peritoneum, between the folds of the broad ligament, a supposed inflammation of cellular tissue, forming a so-called "pelvic cellulitis." Verily a case of *lucus a non lucendo*.

Perhaps it will be worth while to pause here a moment and enjoy the pleasure which delighted the pedantic Wagner, that of transporting ourselves into spirit of other times and observing how wise men have thought, in order to mark our own progress:

"Es ist ein gross Ergetzen
 Sich in den Geist der Zeiten zu versetzen
 Zu schauen wie vor uns ein weiser Mann gedacht.
 Und wie wir's dan zuletzt so herrlich weit gebracht."

In the first place, it is often supposed that the ancients knew little or nothing of uterine diseases, had no works on the subject and left all treatment of such affections to ignorant midwives.

Nothing can be further from the truth. The most important uterine diseases have always been and always will be clinically the same, although the treatment has improved with the knowledge of pathology, and the advance of surgery due to the introduction of anæsthesia and the enforcement of cleanliness.

How graphic and true is the clinical description of pelvic inflammation by the father of medicine: "If the uterus is inflamed the menses are suppressed, and the vagina is mottled with many fine veins, like a spider's web, the fever is acute and causes delirium, and the menses when they reappear are scanty and unhealthy; if the patient eats anything she vomits, and pain invades the lower part of the abdomen, and the loins, and the patient faints, and shivers through her whole body, but the belly is sometimes hard and sometimes soft, and it is inflamed and swollen."

Then comes the description of the symptoms of subacute general peritonitis, which sometimes ensues, and the severe course of which is described; to this let me add the description of the results of local examination from Mercatus, the court physician of Philip II, of Spain: "If the posterior and superior part of the uterus is inflamed, there is pain in the parts around the navel, and sometimes we see them raised in a swelling, but there is worse pain in the loins and

¹ De virg. et vid. affect. et de uteri morbis, lib. ii. p. 606.