bulges out more when the child cries or coughs, and easily induces convulsions. The scalp covering it is mostly thin and devoid of hair.

(3.) With *vascular tumors.* These are very rare in the new-born; and, when they do occur, are very seldom met with upon the scalp. They do not fluctuate, have a doughy feel, and no bony ring. The integument covering them has a bluish tinge, due to the strongly-developed veins beneath.

Treatment.—The treatment may very readily be divined from the delineation which we have given of the course of the evil. If the cephalæmatoma is quietly left to itself, is not squeezed, the skin covering it is not irritated, and no surgical procedures are undertaken, it becomes completely absorbed, as stated above, in from three to six months, the children at the same time continue to develop without any hinderance, suffer no pain when the uneven bone is pressed, and, in general, experience no bad effects from the entire process and its sequelæ.

Notwithstanding these incontrovertible facts, there are a number of methods of treatment which have been invented partly by surgeons anxious for an operation, and partly by altogether too meddlesome physicians. The tumor has been washed with all possible aromatic waters, been smeared with iodine, ammonia, and blue ointments, etc., etc. A mild pressure has been exercised upon the tumors by pencilling them with collodium, or by a tin plate with which the child's cap was lined, caustics have been applied, setons introduced, and, lastly, the blood has been evacuated from the tumors by puncturing, slitting, or even by dividing them by a crucial incision.

Compression, cauterization, puncturing, and incisions, only cause harm and danger through irritation of the scalp, and exposure to the air of the bones denuded of periosteum. In the so-called discussive treatment, the most harmless remedies are the best, and I therefore use only some indifferent kind of fat, which is daily rubbed upon the tumor. According to *Fürth's* report, I learn to my satisfaction that, for many years back, sixty-nine cases have been treated in the Vienna foundling-houses on the purely expectant plan, and with the best results.

D.—*DISEASES OF THE NAVEL.*

After the cord has been divided, the portion remaining adherent to the abdomen of the child begins to dry up, and falls off between the third and tenth day. The time for the separation of the cord from the body is subject to the formation of the funis; when it is thin, it will drop off rapidly; when thick, or, as the midwives say, fat, it requires a longer time for the water contained in the Whartonian

gelatinous substance to become absorbed or evaporated. As a result of the customary enveloping of the cord in a rag, and of confining it by the belly-band, it becomes flattened like a piece of tape, on which the arteries and vein are seen as three dark stripes. At the place where the Whartonian gelatinous substance joins the abdominal walls, the integument, at the shrinking of the umbilical cord, becomes contracted into a radiated depression, and, when the cord finally falls off, a tolerably firm, dry cicatrix is found to have formed. In some instances the integument is found prolonged for some distance upon the cord, by which, after the latter has dropped off, a disproportionately large pad and a deep funnel result, a condition that has been denominated "flesh navel," and is delineated on Pl. I., Fig. 9, a and b.

In fat umbilical cords, this process of cicatrization is less advanced; instead of the cicatrix, a red, inflamed, humid, or an actual suppurating surface appears, from which various pathological conditions originate. The desiccation of the cord progresses only in the living child; when the new-born dies, soon after birth, the cord *does not desiccate*, but quickly begins to *rot*, and, in medico-legal autopsies, this point may serve as an index in determining the time when death ensued.

Treatment of the Normal Navel.—In order to obtain a uniform desiccation and dropping off of the umbilical cord, it is necessary to protect it from all traction and maltreatment. It should be wrapped up in a fine soft piece of cotton or linen rag, and confined to one side by the belly-band. In dressing and undressing of infants, as well as during bathing them, all handling of the navel-string, that is constantly becoming stiffer, should be avoided, and the attempt should never be made to pull or twist the cord with a view to its speedy removal.

The following pathological processes occur during or after the fall of the cord:

(1.)—Inflammation of the Umbilical Vessels (*phlebitis and arteritis umbilicalis*).—It sometimes happens fortunately, however, but rarely, that the coagulated gelatinous substance which fills out the umbilical vessels, beneath the abdominal muscles, becomes purulent, decomposed, and produces a sero-purulent discharge from the navel. By pressing around it, a few drops of serum may be squeezed out at one time. Owing to the pain and inflammation, the children are very restless, exercise the abdominal muscles as little as possible, and invariably have fever. Soon pyæmic inflammations of the serous membranes, or erysipelas of the abdominal parietes, become superadded thereto, and the children perish, at the longest, by the end of the third week. When, exceptionally, no purulent absorp-

tion occurs, the discharge grows less, and the navel, after several weeks, becomes firmly cicatrized. But, as these cases of phlebitis are especially observed in lying-in houses where puerperal fever prevails, it is generally followed by pyæmia and death.

Treatment.—The treatment is very simple; no crusts are allowed to form upon the suppurating surface, by keeping it constantly covered with compresses dipped in warm water, and also by syringing the parts with warm water every two or three hours. The main indications always are the speedy removal of the child from the infected lying-in hospital, and to provide for it a strong, healthy wet-nurse, which, of course, can only be achieved in the fewest number of women confined in a lying-in asylum. If compelled to feed the patients by hand, milk and water, or milk with tea, will serve during these processes to prolong life. Diarrhœa must be arrested as quickly as possible by muc. gum. arab. ʒ j, with tincture of opium gtt. j, of which one or even two teaspoonfuls may be given.

(2.)—Blennorrhœa and Ulceration of the Navel.—In fat navels, or in consequence of uncleanliness and maltreatment of the new cicatrix, it begins to discharge after the manner of mucous membranes. This, however, is readily arrested by the use of lead-water, compresses, or by touching the surface with lunar caustic. But, when this condition has lasted for some time, small excoriations begin to form upon the abdomen, the whole surrounding integument becomes inflamed, is painful to the touch, and a round ulcer, of the size of a penny, forms. In the worst cases, perforation of the ulcer, peritonitis, and death, may follow.

Treatment.—By the application of tepid-water compresses, and subsequently touching it with lunar caustic, cicatrization of the navel will almost always be attained, if the children in other respects are well nourished and suffer from no digestive disturbances; in the contrary case, the pain and suppuration of the ulcerating navel naturally contribute to hasten the atrophy and exhaustion.

(3.) Gangrene of the Navel.—In feeble children delivered in lying-in houses, where puerperal fever prevails, an umbilical phlebitis, or even the just-described ulcerating navel, may become *gangrenous*, it becomes converted as it were into a grayish-brown sphacelous mass; the gangrene rapidly encroaches upon the abdominal walls, the epidermis becomes loose, may be pulled off, and the cutis found beneath has a gray, bluish color. Bloody serum occasionally exudes in tolerable quantities from between the sphacelous mass. In most instances peritonitis rapidly supervenes, and the fæces may also escape through a gangrenous ulcer if agglutination of a portion of the intestines with subsequent ulceration has taken place. These patients but

very rarely recover; in case of recovery, the gangrene becomes circumscribed, the slough falls off, and a granulating surface remains behind. The usual termination is death in from eight to fourteen days.

In the *treatment*, unsparing cleanliness and a good wet-nurse are the most important agents; chlorine-water compresses, or water containing tr. myrrh, are very useful for the purpose of eradicating the gangrenous odor. Pure coffee with milk and sugar, or a few teaspoonfuls of wine, will always prove the most effectual means of supporting the extremely depressed state of the health.

(4.) Ulceration of the Umbilical Stump—(*Fungus Umbilicalis*).—Sometimes after the cord has dropped off, and before it has become cicatrized, a pediculated excrescence springs up from the raw surface, which may attain to the size of a pea and larger, and, of course, hinders the formation of a cicatrix. The adjacent abdominal integument becomes puffy, red, and excoriated, and by neglecting these symptoms there is great danger of gangrene supervening. If excoriations have already formed, they should first be thoroughly cleansed, and the umbilical fold should be fully opened, so as to enable one to ascertain accurately the cause of the ulceration of the stump, for very often it becomes covered by the puffy folds as is represented in Fig. 8 on Pl. II. If the stump and umbilical folds are excoriated, it might be supposed that a wound existed, and this erroneous supposition can only be avoided by thoroughly opening and carefully examining the fold. The *treatment* consists in abscission or deligation of the stump. Abscission may be performed without any assistance; the umbilical fold is stretched out with the left hand, and the pedicle is severed with a Cooper's scissors in the right, after which the bleeding surface is touched with a piece of lunar caustic. In the deligation both hands have to be employed, and an assistant is therefore required, who is to stretch out the umbilical fold with one hand, while with a probe in the other he pushes down the ready-made noose as deep as possible. As the ligature is tightened it cuts through the stump, and here also a slight hæmorrhage takes place, but which is readily controlled by lunar caustic. From what has just been said it follows that the abscission of the pedicle is much easier, simpler, and just as devoid of danger as the deligation. I presume that, if this pediculated stump were left to itself, it would desiccate by degrees and die, and a spontaneous cure would thus take place.

(5.) Hæmorrhage of the Navel.—After the navel-cord has fallen off, and before complete cicatrization has taken place, highly dangerous bleeding occasionally occurs, which is but seldom possible to control. Suddenly and without any cause the belly-band is found to be bloody, and, when it is untied, drop after drop of blood is seen

to well up out of the umbilical depression. If the blood is gathered up in a watch-glass it will take several days before it becomes coagulated, and the coagulum that has finally formed remains loose and flocculent. The children continue to bleed and perish in a few days, having become extremely anæmic, with petechiæ and ecchymotic spots dotting the whole surface of the body, and which at the autopsy are also found upon the pleuræ and pericardium. This disease, on the whole an extremely rare one, for it only occurs once in 10,000 newborn children, I have seen but once; at the autopsy the umbilical vein and arteries were found to be completely filled up with thrombi. This child died on the eleventh day, and the father informed me that he was the son of one who was predisposed to hæmorrhage; that he would bleed for days from any slight and ordinary cut, and that at one time he lost so much blood, after the extraction of a tooth, that he remained pale and feeble for many months thereafter. Hæmorrhage of the navel is, therefore, with probability to be regarded as the first indication of a hæmorrhagic diathesis and blood dyscrasia, and that is probably also the reason why these cases of hæmorrhage occur so infrequently.

Treatment.—The ordinary local hæmostatic remedies and the very much praised liq. ferri sesquichlor. are totally inert here, as also the deligation *en masse* advised by *Dubois* and *Scanzoni*, accomplished by deeply transfixing the navel crosswise with two needles, and twisting a ligature over them in the form of a figure of 8, proved ineffectual in my case, as the blood continued to flow from the new punctures made by the needles. *Thomas Hill* has cured a case by pouring a solution of plaster of Paris upon the freshened wound of the navel, and filling up the fissures and cracks originating subsequently with new plaster; this method is at any rate devoid of danger, and easily carried out, and therefore deserves future trials. The treatment recommended by some surgeons, to search for the umbilical arteries and vein, and when found to deligate them, is based upon the erroneous supposition that the blood comes from these vessels; but the case alluded to proved that the hæmorrhage had no such origin. If the theory of a blood cachexia is adhered to, which until now has had the greatest probability, it will very readily be perceived that all operative measures have to be discarded.

(6.) Rupture of the Navel—(*Hernia Umbilicalis*).—By rupture of the navel, two conditions are briefly understood, which have scarcely any resemblance to each other, namely, congenital and acquired rupture of the navel (exomphalus, omphalocele congenita, *rupture of the umbilical cord*—hernia umbilicalis, omphalocele acquisita, *rupture of the umbilical ring*).

Congenital rupture, or rupture of the umbilical cord, is due to an arrest in the development of the abdominal coverings, in the fissure of which the rupture makes its appearance. The abdominal plates of the embryo, which grow right and left from the primitive lines or stripes, are the first rudiments of the abdominal parietes; they grow into the germinal vesicle, approach each other with their borders, and by that means enclose a cavity—the future abdominal cavity—in which a portion of the germinal vesicle becomes constricted. This constricted portion of the germinal vesicle is converted into the intestinal canal, which communicates by a passage with the portion of the vesicle lying outside of the belly (umbilical vesicle). This passage is the *intestinal navel;* the borders of the still incompletely united abdominal plates surrounding it form the *membranous navel* (*Hautnabel*). Now, if this constriction, which, up to the seventh or eighth week of fetal life, is absent, does not take place properly, the alimentary canal will develop itself in the open vesicle, will thereby keep it permanently open, and the liver is very much disposed to pass into the spacious vesicle, into which it is directly urged by the umbilical vein.

If the portion of the bowel which is normally retained at the base of the navel-string does not return into the belly at the proper time, and continues to develop itself in the umbilical vesicle, it will finally attain a dimension that will also prevent its return into the abdominal cavity after the delivery, as fruits, which, while unripe, have been introduced into a bottle, are found impossible to be extracted when they have become ripe.

But, if a part of the liver shares the umbilical opening in conjunction with the bowel, then the liver, by its density, will keep the ring wide open, and the bowel contained in the vesicle, through its increase in size, returns again into the abdominal cavity. Those congenital umbilical ruptures, in which a portion of the liver does not intervene, can never be reduced, the knuckle of intestines becomes gangrenous immediately after birth, after the cord has fallen off, followed by peritonitis and death. Congenital ruptures which contain a section of the liver, possibly, are capable of undergoing a spontaneous cure. The peritoneal coat of the liver becomes covered with granulations, the large opening gradually contracts, and a firm cicatrix forms. *Debout* has seen a case cured in this manner. The treatment is very simple: the granulating surface is covered with a piece of lint smeared with cerate, and the child is nourished as well as possible.

The acquired rupture, rupture of the umbilical ring, occurs several weeks or months after delivery, after the cicatrix of the navel has formed at the right time and in a proper manner, and is principally observed in rather lean children, who suffer much from flatulence and

cry continuously. The umbilical ring is stretched a little, and the abdominal pressure forces a piece of the small intestines through it, pushing the peritonæum and the distensible umbilical cicatrix in advance, so that a protuberance presents itself instead of the usual depression, which may attain to the size of a cherry or even of a small apple. A white, glistening spot is found in the centre of the navel, which corresponds to the place where the three umbilical vessels have become united after the cord has fallen off, and has been called the *vascular navel* (*Gefäss-nabel*). It is less distensible than the *membranous navel*, and therefore is not always found upon the summit of the rupture, but either laterally or downward. The rupture usually contains a small knuckle of the small intestines, which but very rarely pushes a portion of the omentum before itself. The reduction is, in all cases, accomplished without any difficulty, after which the size of the ring may be ascertained with the point of the finger. By the use of a proper truss, the umbilical ring does not simply decrease in size, but becomes converted, as I have often observed, into a diagonal fissure, the borders of which gradually approach each other. I have never yet met with any incarcerations of the intestines here.

The treatment of this rupture, which mostly also heals spontaneously, consists in the adaptation of a stopple made of charpie, cotton-cloth, or cork-wood, but which should be a little larger than the umbilical ring, and securing it by pieces of adhesive plaster six by eight inches square, and by a belly-band, the hernia having been previously reduced. When the parents of the child have once been taught how to apply this apparatus, it may then be bathed daily and the compress is applied again after each bath. I cannot agree with the opinion of some authors, that the rupture should be supported by long strips of adhesive plaster running around and across the whole body, as the abdominal respirations are thereby very much impeded; furthermore, there is no plaster that will not erode the skin after a while, and it is much more difficult to instruct the parents how to renew this apparatus than the one recommended above; besides which, in the other case, the bathing has to be neglected for a long time, to the great detriment of the child. By this simple method, if assiduously applied, each and every umbilical ring, even though it is ever so much dilated, may be brought to a closure in from three to six months, if the child in other respects thrives well.

E.—*TRISMUS AND TETANUS OF THE NEW-BORN.*

Symptoms.—(*τριδμὸς*, to gnash; and *τέτανος*, rigid convulsions.) Between the first and fifth day after the cord has dropped off, never before nor later, children are sometimes attacked by trismus. Certain pre-

monitory signs usually precede the attack, such as restlessness, crying, a peculiar trembling of the lower jaw, starting up from sleep, and avidity for the breast, which, however, the child instantly forsakes again. After these premonitions have lasted several hours, at the most a day, the child is found to be unable to open the mouth. The masticators are felt to be hard and tense, but the integument over them, in contrast with scleroma, is movable. The countenance loses the expressionless appearance peculiar to the new-born, the mouth becomes pointed, the compressed lips are corrugated by striated wrinkles, the forehead and cheeks become wrinkled, the eyes, surrounded by a bluish ring, are firmly closed, the head is strongly retracted, the nape is stiff, the skin is turgid and reddened. The child is not able to swallow; even when the jaws with difficulty have been opened and some fluid has been poured into the mouth, the nutriment invariably flows out again in a very short time. This condition, at first, has some intermissions; the spasms remit for hours at a time, so that a recovery may be supposed; they, however, invariably return, constantly grow more protracted, and mostly persist till death occurs; only occasionally do the contracted muscles become relaxed before the close of life. In the severest form of the disease, the muscles of the entire body become so intensely rigid, that the child may be raised up like a stick of wood. Death takes place in from one to eight days, by suffocation or from exhaustion. The child is either choked in consequence of the closure of the glottis during a convulsive paroxysm, or in consequence of the generally rigid, totally incapacitated inspiratory muscles. In the second case, in death from exhaustion, it is the frequent occurrence of the convulsions which produces a rapid sinking of the strength of the system. In protracted cases, the deprivation of sleep and sustenance brings about a final dissolution.

Etiology.—In very few internal diseases can the cause be pointed out with so much certainty as in trismus neonatorum. A disease that makes its appearance only between the first and fifth day after the cord has fallen off, must certainly have some connection with the cicatrization of the navel. It is also very natural, in such a rapid contraction of the tissues as takes place here, for a nerve now and then to become compressed, or be dragged, and thus produce all the reflex contractions, as we see them induced in traumatic tetanus by a foreign body. This will occur all the more readily if the umbilical cord was thick, treated roughly, and, as a result of which, ulcerations supervened. In most autopsies of children dying from trismus, marked morbid alterations in the umbilical arteries and vein are found, such as dilatation, redness, softening, ulceration of the vascular coats, pus and serum within and in contiguity with these vessels.

In Germany, the disease occurs only in the sporadic form; I have been unable to determine whether it might be more frequent at certain times or under certain changes of the weather. I have seen it at all times of the year, and under all states of the barometer, in cool and hot, moist and dry weather. In the Dublin lying-in houses, and in Mailand, trismus has been observed in an epidemic form; it is endemic in Trieste, Spain, Minorca, in the West Indies, and Cayenne. *Half* of the children born in some of the colonies of Guiana are said to perish from tetanus. It not only occurs endemically in the southern, but also in the high northern latitudes, in Iceland, for instance, where the natives designate it by the name of "lock-jaw," "chinclose." And *Mackenzie* states that it rages so violently among the children born on Westman Eyer—islands on the southern coast of Iceland—that the small population is only sustained by immigration.

Aside from the alterations in the umbilical vessels already mentioned, pathological anatomy furnishes no characteristic lesions. The plethoric condition of the spinal cord, and the bloody effusions occasionally met with in the spinal canal, are, no doubt, secondary processes. The bodies retain their wood-like rigidity for some time after death, and even in the warm seasons feel as cold as ice.

The *prognosis* is extremely unfavorable. *Golis* and *Heim*, in all their extensive practice, have not seen one case recover. *Hufeland* puts the ratio of mortality as = .50 to 1. All of my patients, at least ten or twelve, died under the best methods of treatment recommended.

Treatment.—Since, according to my experience, and that of the most extensively employed children's physicians, the once-developed trismus neonatorum invariably leads to death, it is therefore doubly important to pay the utmost attention to the prophylactic treatment; for it will not be easy to find a case in which, by strict investigation, some neglect in the care of the umbilical cord will not be discovered. Of course, where the affection prevails so endemically that a great number of the new-born are carried off by it, *Frank's* advice is to be followed, according to which, the pregnant women must leave the dangerous region and not return until complete cicatrization of the navel has taken place.

A cautious management of the umbilical cord, such as has already been described on page 49, and a cleanly, forbearing treatment of the still incompletely-formed cicatrix of the navel, to which principally a uniform temperature of 66 to 68° F., pure air, and healthy mother's milk belong, are therefore to be strictly insisted upon.

Since it has never yet been my good fortune to cure a child of trismus, I am therefore unable to suggest any remedy for the fully-developed disease, and must content myself by enumerating the various methods of treatment that have been employed and generally acknowledged as useless: (1.) The antiphlogistic treatment, especially abstraction of blood; (2.) Antispasmodics and narcotics; (3.) Diaphoretics and counter-irritants; and (4.) The evacuating method. Each of these methods of treatment has its advocates, and each has its contemners.

Of all the remedies, the narcotics are the most promising. In one case I gave tr. opii, one drop every hour; in another, one drop every twelve hours; in another, I used chloroform every two hours. In this child, the rigidity passed off during each narcotism, but returned in from half to one hour afterward. On the next day the symptoms were the same; and, as I was about to narcotize it for the seventh time, I found it was dead. The most rational treatment seems to be, not to allow the child to perish by inanition; which is accomplished by injecting, twice daily, milk or beef-tea, with yolk of eggs, into the stomach by the aid of a gum-elastic catheter, which is easily introduced through the œsophagus; and to cauterize the spot that formed the starting-point for the trismus, the cicatrix of the navel, with the ferrum candens (actual cautery), a treatment which I intend to try in the next case that may present itself to me.*

F.—*SCLEROMA* (*from* σκλήρος, *hard*). *INDURATIO TELÆ CELLULOSÆ, ZELLGEWEBSVERHÄRTUNG* (*INDURATION OF THE CELLULAR TISSUES*).

Scleroma, by some also called œdema neonatorum, or œdema compactum, consists in an induration of some parts of the cutis, which, in this manner, occurs only in the first weeks of infantile life.

Symptoms.—The infiltration of the integument begins on the lower extremities, the redness of which increases while the temperature at the same time decreases. At first the calves of the legs swell up, and become perfectly stiff and hard; the swelling next attacks the feet, by which the soles of the feet become peculiarly convex; it then extends upward over the knees, upon the thighs, to the genitals, the pubis, nates, and navel; the thorax in a most remarkable manner is always spared; on the other hand, the upper extremities and the face, particularly the lips and cheeks, which then assume a peculiar glossy appearance, are very generally implicated in scleroma. The dark-red color of the affected places, that is seen at the invasion of the disease, very soon fades, and gives way to a yellowish; the skin becomes dry, and the epidermis, which otherwise is always cast off, does not attain to a desquamation here. In the most intense form of scleroma, the child lies intensely swollen, cold, and stiff, like a

* See Appendix, Treatment of Trismus Neonatorum.

frozen corpse. The hard, glistening cheek, the puffed-up, jutting lip, the eyelids, that are more œdematous than indurated, and which are but little capable of opening themselves, disfigure the face so much as to make it entirely unrecognizable. At the invasion of the disease, the affected parts of the skin are still movable, and it is easy to make a depression with the finger in the sclerous tissues, which will last for some time; later, however, neither is possible. The depression of the temperature is very characteristic in such children, not only on the upper surface of the body, but also in the mouth, where, according to Léger's measurements, the thermometer may sink to 73° F. Artificial warmth, by the aid of bottles filled with warm water, warm cloths, hot baths, can only temporarily raise the temperature of the cold extremities, no more, in fact, than that of any other inanimate object.

All the physiological functions are here either suppressed, or but feebly developed. The respiration is superficial and slow, the voice weak and whimpering; the cry is never loud nor continuous. The child sucks only for a few minutes, and extracts but a small quantity of milk from the breasts. The meconium is not evacuated for some time, the secretion of the urine is very much diminished. The pulse is always very small and slow; according to *Valleix*, it ranges from sixty to seventy-two beats per minute; later, when the scleroma is far advanced, it can no more be felt in the extremities, on account of the induration of the integument. The action of the heart is extraordinarily feeble; the second sound is scarcely audible at all. The sensibility of the affected parts of the skin is almost wholly gone, of which it is easy for one to convince himself by pricking them with a pin.

As all the symptoms just described but gradually become intensified, a division of the affection into stages is therefore impossible and also unnecessary. The further the indurated œdema advances, all the more profound becomes the lethargy, all the slower the respiration, all the more perceptible the coldness. Finally, a bloody serum flows out at the mouth and nose, and death ensues without any convulsions, simply by the respirations becoming slower and slower, and then ceasing altogether.

In the rare cases which pass over into a recovery, deeper and easier respirations are at first observed, the action of the heart becomes stronger and quicker, the appetite increases, and lastly a diminution of the œdema of the indurated parts takes place. According to *Valleix*, the eyelids and upper arms are the first to become thin and flaccid, then the buttocks and the hypogastrium, later the hands; the legs and feet remain œdematous for some time after the other

parts have become normal. So long as the feet are still swollen, the subjects cannot be declared out of danger; they sometimes become drowsy, drink less, and die in two or three weeks.

The affected parts retain the violet-red color for some time after the œdema has totally disappeared; the skin is weak, soft, and corrugated, and does not regain its normal condition for some time.

Lobular pneumonia is the most frequent complication; *Valleix* observed it five times in twenty-five cases. Intestinal catarrh is very rarely present, and that, in the difficult introduction of sustenance, is very readily explainable. Yellow discolorations of the new-born naturally frequently occur, but true icterus with yellow sclerotics, urine containing coloring matter of the bile, and gray fæces, are, on the whole, very rare in children, nor have they any special reference to scleroma.

Post-mortem Appearances.—After death the parts affected by scleroma rapidly become blue, and retain their hardness and rigidity; the rest of the skin, especially of the trunk, is normal, yellowish-white. The infiltration is most marked on the side on which the body has been placed, as a result of the fluids sinking toward the most depending parts. On incising the affected integument, black, semi-fluid blood flows out, but from the subcutaneous cellular tissue, which is so intensely œdematous, and which has produced that enormous enlargement of the extremities, a large quantity of yellow or sanguinolent liquid exudes, which neither chemically nor morphologically differs from the ordinary dropsical serum. After this fluid has escaped, the indurated parts become soft and flaccid again. The connective tissue over the aponeurosis is converted into a gelatinous mass of two to four lines in thickness; beneath the aponeurosis, in the intermuscular structure, no œdema is ever found. The solidification of the adipose tissues, which occurs when the corpse has been exposed to cold, should not be confounded with this condition. In that case, too, the extremities feel hard and stiff, but they are not swollen, and are not so blue, and, on incising, the subcutaneous cellular tissue is found normal, dry, and without any gelatiniform infiltration.

In scleroma, then, we have essentially to deal with an acute œdema of the skin, the causation of which is to be sought in general circumstances. The rest of the organs are not constantly changed; most frequently serous effusions into the peritoneal and pleural sacs are found, and lobular pneumonia occasionally supervenes. The fetal circulatory passages are sometimes closed, sometimes again still open, as is very frequently the case in infants who die in the first days of life; scleroma, therefore, cannot be regarded as having any special connection with greater alterations of the circulation.