

Etiology.—Scleroma attacks by preference premature children. On the whole, it is much more easy to decide what does not produce scleroma, than what does produce it. It does not originate through the fetal passages remaining open, nor from lobular pneumonia. It is especially to be borne in mind that the retardations of the pulse and of the respirations, with the exception of those cases that are complicated with pneumonia, are constant phenomena. Most probably, therefore, it is the lack of innervation of the cardiac muscle, which does not contract often enough, and thus produces the coldness and peripheral transudation. The disease is decidedly more frequent in winter than in summer.

Treatment.—*Valleix* has seen two children recover, in each of which two leeches were applied behind each ear. Other children died under the same treatment. The most important part of the treatment seems to be to keep up constantly a high temperature of the body, which is accomplished by surrounding it with bottles filled with hot water, warm cloths, etc. It is also rational to accelerate the contractions of the heart by the administration of alcoholics; on the whole, however, it cannot be denied that all these agents, as a rule, prove ineffectual, and only in exceptional cases, in slightly-diffused scleroma, do they accomplish a favorable result.

G.—MELÆNA NEONATORUM.

Between the first and third days of infantile life, gastric and intestinal hæmorrhage occasionally occurs. Vomiting of blood is less frequently observed than bloody, discolored fæces. The bloody stools are almost always very copious, and recur at short intervals. The blood is sometimes fluid, and then again coagulated into large lumps. In this affection the patients sink very rapidly into a state of collapse, the lips become blue, the skin cold, the pulse is barely perceptible, and symptoms of acute cerebral anæmia supervene. Usually, the hæmorrhage runs its course in twenty-four hours; still, it may also last three to five days. The stools retain a dark color for many days after the bleeding has stopped. According to *Rilliet*, half of the children attacked by this disease recover.

At the autopsy large quantities of fluid or coagulated blood are found in the stomach and intestines, and the highest degree of anæmia in the other organs. The fetal circulatory passages are open; but this, after all, is observed in many new-born who did not die from melæna. The turgescence of the mesenteric arteries and their systems of capillaries, seen even in the physiological state and produced by the sudden closure of the umbilical arteries, so important in the

foetus, and which arise directly from the hypogastric arteries, may be looked upon as a cause of this disease. An especial thinness of the walls, or friability of the affected system of vessels, must certainly play a part here; because, otherwise, this in reality very rare form of hæmorrhage would have to occur much more frequently. The closure of the ductus venosus Arantii, and especially that of the branch of the umbilical vein opening into the portal vein, deserves more frequent and stricter investigation to explain this hæmorrhage.

Besides becoming bloody from intestinal hæmorrhage, the fæces may also assume that character through blood having gained an entrance into the mouth of the child, and then been swallowed by it. This may happen in all operations on the lips and tongue, in epistaxis, the result of a blow upon the nose, or of that organ coming violently in contact with a hard substance, from the maternal blood having been swallowed during delivery; and, lastly, the new-born may suck in some blood from the breasts of the mother when any sores exist around the nipples, or when a strong child endeavors to suck for a long time from milkless breasts. All these admixtures of blood are very rare; the blood in these cases is not found in large quantities, and usually is not ejected by the intestines, but thrown up. Nor do the infants sink into a state of collapse, as in actual intestinal hæmorrhage.

Treatment.—The only case of intestinal hæmorrhage which until now I have had an opportunity to treat, occurred in an infant thirty-six hours after delivery. In the course of twenty-four hours ten diapers were soiled by the discharge of blood-coagula, which were of the size of a hazel-nut. The strong, robust child quickly turned to a waxy paleness, the extremities became cold, and the pulse was scarcely to be felt. I caused the temperature of the room to be raised to $72\frac{1}{2}^{\circ}$ F., laid three jugs filled with hot sand around the child, and ordered it to drink at the breast of the mother every hour. As in the course of the next twelve hours no remission ensued in the bleeding, I gave him—

℞. Liq. ferri sesquichlorat. ℥j.
Aq. distillat.,
Aq. cinnamon aa, $\frac{z}{3}$ ss.
Syr. simple, $\frac{z}{3}$ ss.

Of which, in twelve hours, the child consumed about the half, and then discharged no more blood. I could not prevail upon myself to try the treatment with ice-cold milk, and cold applications to the abdomen, proposed by *Rilliet*, on account of the reduction of the temperature of the surface of the body that must necessarily result therefrom; on the

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contrary, I consider it more rational, in this intestinal hæmorrhage of the new-born, to induce as strong a turgescence as possible toward the integument, which is best accomplished by a high temperature. The child rallied in a few days after the bloody stools stopped, and from that time on has prospered excellently well.

H.—*ICTERUS NEONATORUM* (from *ικτερος*, *Jaundice*).

In addition to the physiological yellow discoloration of the skin mentioned on page 6, to which, in fact, most of the alterations of the color of the skin regarded as icterus belong, there is yet a condition in which the coloring matter of the bile is actually retained in the blood, and in many instances it is of a very serious nature. Here the sclerotic is yellow, the pus of the ophthalmo-blennorrhœa which occasionally supervenes turns to an orange color, and the urine dyes the diapers dark yellow. The fæces, however, never become as gray as in the adult, but retain a light-yellow or greenish tint. At the autopsy the serous membranes, the muscles, bones, etc., are found infiltrated with the coloring-matter of the bile, just as is seen in adult icteritics. Most of the icteritic children are feverish and suffer from a still uncatrized and ulcerating navel, with which the icterus neonatorum stands in the closest connection. In those cases which terminate fatally, usually phlebitis of the umbilical, sometimes also of the portal vein, and small abscesses in the parenchyma of the liver, are found. True icterus neonatorum is therefore to be regarded as a local condition or complication of phlebitis umbilicalis; it is not, however, possible to maintain that a duodenal catarrh or a mechanical occlusion of the biliary ducts may not also now and then cause an icterus. In fact, all the icterus of the new-born which terminates favorably belongs to this category. Its usual causation, according to *Frerichs*, is to be sought in a diminished tension of the capillaries of the hepatic parenchyma, which ensues at the cessation of the afflux of blood on the part of the umbilical vein, and causes an augmented transposition of bile into the blood.

As regards the course of the disease, every thing that has been said of phlebitis umbilicalis, on page 59, is applicable to the cases of the first category; the subjects, at the most, linger till the fourteenth day, become atrophied very rapidly, and mostly perish under a profuse diarrhœa. The latter kind, the simple icterus, lasts from eight to fourteen days. The yellow color never becomes intense, and during the whole course the general condition is barely perceptibly disturbed.

Treatment—The treatment of the pernicious icterus is a most

unsatisfactory one. So far as I am aware, there is not one case of recovery to be found in the whole medical literature. All the more pleasing, on the other hand, is that of the yellow discoloration of the skin, falsely denominated icterus, in prematurely-born children, or after difficult deliveries. It invariably disappears spontaneously in the course of a few days, and nothing more is necessary than to pay attention to the digestion of the child. New-born children very rarely suffer from actual constipation; and, where that is the case, the universally beloved syrup of rhubarb will also be capable of removing the difficulty.

I.—*CONJUNCTIVITIS BLENNORRHOICA NEONATORUM*.

By blennorrhœic inflammation of the conjunctiva (from *βλένω*, mucus, pus), we understand an inflammation that runs its course, not only with a profuse suppuration on the free upper surface of the conjunctiva, but also with an effusion of plastic exudation into the parenchyma thereof. The contagious, profusely-secreted pus and the uniform and simultaneous implication of the papillary bodies characterize this disease from all others.

According to the severity of the affection, we distinguish two kinds of blennorrhœa as described by *Artt*.

First Kind.—Cases which, immediately from the beginning, are inclined to run a very rapid course, and display the tendency to attain the highest degree.

In the first grade of this form the palpebral conjunctiva is relaxed, uniformly red, and secretes a tolerable quantity of pus; all these symptoms are present in an acute form. Often the simply purulent secretion ceases suddenly and makes place for a thin serous discharge, in which flakes and fibres swim about, frequently adhering with tolerable firmness to the conjunctiva. A marked degree of swelling, an acute œdema of the lids, takes place here. Usually this condition lasts so short a time (from twelve to twenty-four hours), that the physician but very rarely has an opportunity to see it.

In the *second* grade of this form the palpebral conjunctiva is dark red and very much swollen, so that the inner canthus is no longer sharply defined, and the absorption of the tears is prevented by the constriction of the punctæ lachrymalis. The ocular conjunctiva, too, is already decidedly infiltrated and injected, the discharge is mostly like thin broth, seldom thick or purulent, and excoriates the adjacent integument. The œdema of the lids is so intense, that it is extremely difficult and painful to open the palpebral fissure.

In the *third* grade, finally, all the phenomena of the second are

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present, only in a more aggravated form, and, in addition, an intensified œdema of the conjunctiva bulbi supervenes. The swelling of the integument of the lids mounts upward over the supraorbital ridge, and downward extends to below the malar bone, and is uniform in degree from the outer to the inner angle of the eye, because, in reality, it is only a secondary affection of the uniformly-inflamed conjunctiva. The secretion is extraordinarily profuse, flows almost unceasingly down over the cheeks, sometimes is thin, then again thick, watery, or purulent, sometimes brownish, colored by an admixture of blood. The conjunctiva bulbi is either uniformly infiltrated, and surrounds the deeper-lying cornea like a red circular rampart or crown, or, in rarer instances, swells up irregularly in the form of weak, vesicular exuberations.

Second Kind.—Cases which, from the very beginning, have a more chronic course, and are unattended by any profuse blennorrhœic discharge. The latter increases only after several days; the morbid changes upon the entire upper surface of the conjunctivæ, however, are marked; granulations and minute warts form, which, in the palpebral sinuses, unite to form cock's-comb-like excrescences.

In the *first grade* of this *second form* the secretion is very slight; the red color, and the uneven state of the conjunctiva, combined with some intolerance of light, are its only characteristic symptoms. This condition may last several days without the morbid changes becoming intensified.

In the *second grade* the affection of the conjunctiva palpebrarum extends as follows: So far as the papillary bodies reach, on the lower about half a line, on the upper nearly one line beyond the orbital border of the tarsus, the highly-red conjunctival membrane is seen to be closely studded with compressed, uniformly-projecting, equal-sized minute warts. At first, these warts bleed at almost every touch, but when they have existed for some time—they often last, when not treated, for months—they become pale on the upper surface, flattened from compression by the eye-bulb, and bleed less easily. The strongest tendency to extuberate is always seen upon the conjunctiva toward the orbital border, where high, cock's-comb-like granulations form.

Here the tumefaction and redness of the lids are but slight, and disappear sooner than the affection of the conjunctiva.

This form of blennorrhœa seldom attains to the *third degree*; only then, as a rule, when, during the disease, still further injurious influences come to bear upon the eye. The anatomico-pathological characters, on the whole, are the same as those of the third degree of the acute *first kind*.

Course.—It does not always happen that a blennorrhœa runs through all the three degrees; it often stops at the second, sometimes even at the first. Nor is it necessary for both eyes to be implicated; usually, however, the pus of the eye first attacked infects the other, on account of which the closure of the still sound eye, more minutely to be described further on, is of the utmost importance. If an actual transportation of the blennorrhœic pus has taken place, as is most frequently the case in new-born children, the process then runs through the first and second grades so rapidly, that the physician, who is called in only twenty-four hours afterward, finds the third grade already fully developed, and the eyes, even at this juncture, may already be hopelessly ruined through extensive destruction of the corneæ.

When the affection stops at the first stage, it will terminate slowly and spontaneously, and without any serious results. Through external injuries, however, it may become aggravated to a higher degree.

The second grade is almost unexceptionally caused by contact with infecting pus. Here much less tendency to a spontaneous cure can be expected, as the extuberations of the papillæ and the preceding suppuration thereof are liable to remain, if not treated, for many months. In this chronic course the lids become markedly hypertrophied and enlarged; they never, however, become shortened inwardly; notwithstanding the subsequent cicatrization of the conjunctiva, an ectropium of the upper and lower eyelids oftener originates therefrom. In other cases, an abbreviation of the palpebral fissure (blepharophimosis) may form, as a result of the excoriations. In the second grade the cornea is but little endangered; small and superficial corneal ulcerations, generally, are only met with.

The third degree, which may develop itself at any time from the first and second, but which may also appear very acute without any inflammation preceding it, is always an extremely dangerous condition.

The Cornea, as a rule, becomes involved.—At the first examination the cornea may have been found to be perfectly clean, transparent, and glistening, but, if reëxamined a few hours after, it may already be softened, purulently infiltrated, and in a great measure destroyed. What aggravates the calamity is that this process invariably occurs in the centre, just opposite the pupil; while the periphery of the cornea, with the centre remaining undestroyed, but very rarely suffers a solution of continuity. There is a very remarkable circumstance connected with these ulcers of the cornea, and that is, that no suppuration ever takes place between the corneal layers, no unguis forms. They have an extraordinarily great tendency to perforate, the iris then

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drops forward, and is quickly covered with a grayish exudation, from which staphyloma subsequently becomes developed. If the prolapsed iris and the exudation covering it are not capable of closing the perforation, phthisis bulbi will take place. In general, the rule may hold good, that the later the affection of the cornea appeared, after the blennorrhœa has passed beyond the highest stage of severity, the less of a destructive tendency will it display. If ulcerations form, notwithstanding the blennorrhœa having existed for some time, say two or three weeks, they will, it is true, increase in size much more slowly; but nevertheless often give rise to circumscribed corneal perforations, and their effects, prolapsus of the iris, opaque cicatrices, anterior synechia, distortion of the pupil, central capsular cataract, staphyloma, etc. In this third and highest grade, children usually have a hot skin and fever, in consequence of pain and sleeplessness.

Causes.—Those cases which are met with in private practice must be separately regarded from those occurring in lying-in and foundling-houses. The extremely frequent occurrence of blennorrhœa in the first six to eight days of life cannot possibly be attributed to general causes alone—glaring light, cold, foul air, uncleanly treatment of the eyes, etc.—for these agents, in some measure, still remain in force for some weeks thereafter; whereas the invasion of a blennorrhœa after the eighth day of life, in private practice, is of the greatest rarity.

Hence, an *infection* through blennorrhœic vaginal mucus, during the passage of the head of the child through the maternal passages, is generally assumed, by which it is not necessary for syphilis to be present and participate. The infecting conditions are then the same as those of a gonorrhœa that has originated after an impure connection. Not every fluor albus, through coitus, produces a gonorrhœa, and still less frequently a blennorrhœa of the conjunctiva during the delivery. Were the latter the case, most of the new-born would suffer from the disease under consideration, for almost all women, during the last weeks of gestation, have an augmented vaginal secretion, a higher degree of which represents a vaginal blennorrhœa. Moreover, the children are well protected against infection during delivery by the eyelids being firmly closed, and by a proper coating of vernix caseosa, by which the rare induction of conjunctival blennorrhœa in comparison with vaginal blennorrhœa of the mother may be explained. That this manner of infection during the progress of the child through the maternal passages is not a very intense one, follows from this, that new-born male children, in the first weeks of life, never acquire a urethral gonorrhœa, nor the female a vaginal blennorrhœa. Be that as it may, this much is irrefutable, that at least from eighty to ninety per cent. of all con-

conjunctival blennorrhœa occur in the new-born, and that in every instance the act of the delivery, *per se*, may be regarded as the most important etiological agent.

Where many children are congregated together, in foundling and lying-in houses, blennorrhœa also occurs in an epidemic form, especially in those lying-in houses where puerperal fever prevails. Here it is especially difficult to determine in which manner the transportation of the pus takes place, since it is known that sponges, towels, diapers, and the hands of nurses, when soiled with blennorrhœic pus, are capable of conveying the poison to healthy eyes; the opportunities of infection occur in such varied and manifold forms, that it is really unnecessary to resort to the air, light, etc., for an explanation.

The *prognosis* depends entirely upon the state of the cornea. The granulations and the exuberations may look ever so frightful, the purulent secretion may be ever so profuse, still all these may pass away without leaving any traces behind them; the morbid alterations of the cornea, however, leave their effects for life. The earlier the cornea becomes implicated, all the greater is the danger of a total destruction. Primary or secondary syphilitic vaginal blennorrhœa, as a rule, produces such intense corneal participation. The œdema of the lids, as a rule, stands in exact relation to the danger of the destruction and loss of the eye.

Treatment.—The task of testing and criticising the various methods of treatment recommended by some and denounced by others is rendered difficult, by the fact that a number of violent blennorrhœæ disappear spontaneously without medication and without scrupulous cleanliness, and leave behind them no morbid alterations of the cornea.

In Munich, where great negligence prevails among the lower classes in regard to the rearing and prosperity of the new-born, it often happens that mothers bring to the physician their three or four weeks' old children with severe blennorrhœa, for some other ailment, and, upon closer inquiry in regard to the affection of the eye, very naïvely remark, "The jaundice attacked its eyes in the very first few days; it is much better now; at first, however, the eyes were very much swollen; matter and bloody water constantly used to run down over the cheeks." If such untreated eyes are examined, the cornea will very frequently be found perfectly clean and intact. A recovery has taken place without any treatment. In other cases, it is true, both bulbs, to the great mortification of the parents, are found completely destroyed. These facts must be candidly premised and kept in view in estimating the value of the methods of treatment now about to be described.

As a prophylactic against transportation of the blennorrhœa from the affected to the still normal eye, a protective bandaging is especially to be recommended. For this purpose the sound eye is covered with a light pad of dry charpie, which is secured by a few strips of adhesive plaster. This pad and plaster should be removed twice a day and the eye carefully examined. If the blennorrhœa has attacked this eye notwithstanding, then this bandaging has completely failed in its object, and must be wholly abandoned in order to facilitate the escape of the pus.

The most important part of the whole treatment consists in a thorough cleansing of the eye. In hospitals and lying-in houses where the children are constantly under the care of experienced persons, a reservoir secured to the wall with an india-rubber tube attached to it, by which the stream of water is conducted directly into the eye, is best adapted for this purpose. The temperature of the water should not be higher than the temperature of the room. In private practice, with proper care, the water may be injected into the eyes with a syringe; or it is allowed to flow into them from a small, narrow-spouted can, which procedures must be repeated at least every hour. A tolerable amount of adroitness is requisite to properly manipulate the syringe; usually the nurses throw the water upon the firmly-agglutinated eyelids, and, of course, as much pus remains beneath them afterward as before. I consider it very inappropriate to hold the lids apart by means of spatulæ every time the eye is cleansed, because such an intense œdema is thereby produced in a very short time, that the upper eyelid comes to drop far down over the lower, and then it is altogether impossible to obtain a sight of the globe. In consideration of these difficulties, and because with the syringe people very often throw the blennorrhœic pus into their own eyes, and thereby lose their own vision, I content myself with cutting up a fine sponge that has already been in use for some time, into angular pieces and with these cause the eye to be sponged every half hour or hour. The nurse should hold the lids open with the thumb and index-finger of the left hand, while with the moistened sponge in the right she brushes over the conjunctiva. This manipulation every person with a good-will can learn to execute; it also completely suffices to cleanse the conjunctivæ, and the pillow and child's garments are not thereby soaked through, as is usually the case with injections.

The Local Treatment.—Ever since *Von Græfe* so strongly recommended the application of nitrate of silver, almost all blennorrhœic conjunctivæ have been cauterized. First of all, it should be observed that, for the purpose of thoroughly cauterizing the eyes, it is necessary to have an assistant, who should fix the head and properly evert the

eyelids.* Either the ordinary nitrate of silver or a mitigated caustic composed of equal parts of nitrate of silver and nitrate of potassa fused together is used for this cauterization. A little olive-oil or salt water will prevent the caustic from spreading unnecessarily. The secretion, as a rule, is somewhat checked after the cauterization; it appears again, however, on the next day more profusely than ever. The eyes are cauterized from day to day, until the disease gradually disappears. Both eyelids should be brushed over every time with the caustic as far back as the orbital reflexion, because the whole conjunctiva palpebrarum is involved in the disease. That this method of treatment is painful, and that for this reason the women do not bring their children to be cauterized a second time, cannot be denied. Moreover, I have often seen perforation of the cornea ensue, notwithstanding the most carefully carried out precepts. Blennorrhœa of the conjunctiva seems to be an analogous process to gonorrhœa of the urethra. A few years ago surgeons were very enthusiastic over nitrate of silver injections in gonorrhœa too. Now, no one resorts to them any more.

A collyrium of corrosive sublimate, or sulphate of zinc or of copper, gr. ss of the first, gr. j of the last two, to an ounce of water, is less painful and about as effectual as cauterization with the solid stick of nitrate of silver. One drop of any of these collyriæ is dripped into the inner angle of the eye, six or eight times daily; the lids are slightly opened, and the head is held in such a position that the drops will run into the eye by their own gravity. The sovereign remedy in the first days of blennorrhœa is

Cold.—But to generate continuous cold upon a given spot on the skin is not as easy as may be supposed. Compresses dipped in cold water, and laid upon the skin, assume in a very short time the temperature of the skin itself. They would therefore have to be renewed so frequently that more than one nurse would be required. But if two or three bits of ice, as large as peas, are placed between the moistened folds of the compress, the melting pieces of ice will keep the temperature of the eyelids reduced for eight or ten minutes. So small a quantity of ice, on melting, does not generate water enough to run down over the cheeks, and whatever there is of it is absorbed by the compresses. As a sure protection against wetting the body, a dry cloth around the neck is very useful. By continuously-generated cold, the œdema of the lids may generally be reduced, and the

* Still, the assistant may be dispensed with, by the physician securing the head of the child between his knees; he then everts one eyelid, which he retains everted with the thumb or index-finger of the left hand, while with the right he is at liberty to handle the caustic. The other eyelids are then similarly treated.—Tr.

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blennorrhœa kept within moderate bounds. By constant, scrupulous cleansing, an astringent eye-wash, and, when the secretion lasts longer, by the inunction of blue ointment upon the forehead, the cornea will be kept from perforation. Warty excrescences in the palpebral sinuses, where the blennorrhœa is nurtured for a very long time, are best removed with the scissors. If perforation and prolapse of the iris have taken place, staphyloma at least may be prevented by energetic cauterization of the cornea, and constant pressure. In circumscribed central leucoma, the sight at a later period may be infinitely improved by the formation of an artificial pupil. If phthisis bulbi (atrophy of the globe) has occurred, the deformity may be mitigated by an imitation eye, in the perfection of which, art of late has made such extensive progress.

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CHAPTER II.

DISEASES OF THE DIGESTIVE APPARATUS.

A.—MOUTH.

(1.) HARELIP AND CLEFT PALATE (*Labium Leporinum—Palatum Fissum*).—Harelip is a congenital splitting of the upper lip; cleft palate, a congenital fissure of the hard palate. In order to thoroughly comprehend these malformations, it is necessary to revert to the history of the fetal development.

As long as the two superior maxillæ remain ununited in the median line, with the intermaxillary bone that has originated from the central process of the frontal bone, to form the hard palate, so long will the mouth and nasal cavities stand in open communication with each other.

Now, in cleft palate, this union is arrested on one side; in harelip, a union between the bones does indeed take place, but seems to have been retarded, on account of which, the upper lip, which is formed primarily of two lateral and one central piece, does not become united; the fissure of the upper lip, corresponding to the one in which the union has been arrested, becomes skinned over like the borders of the lips, and union is subsequently altogether impossible. From these remarks, it will be readily perceived why harelip never occurs in the centre of the lip, but always on one side: the chasm invariably terminates in one or the other nasal cavity.

We have various grades of fissures, according to the time in which, during fetal life, this arrest of development has taken place.

The cleft of the hard palate may be so wide as to easily admit a finger, and all the infundibuli may be inspected without any difficulty. In this intense form, scarcely any upper lip is present, and one or both nasal orifices are immensely distended. Or the intermaxillary bone, covered with some skin, projects forward, and forms a knob under the nose. At each side of this bulb, fissures of the lip run into the nasal orifices. Or there is only a narrow fissure in the hard palate, which will barely admit the back of a knife, and, corresponding with it, the cleft in the upper lip is also less grave. Or both upper jaws are perfectly normally formed, and there is only a narrow fissure in the upper lip, the margins of which almost touch each other, and either extend clear into one of the nasal openings, or only half way to it.

There are families many members of which are deformed by harelip, so that we are compelled to assume a kind of predisposition or inheritability.

The effects of this evil are:

(1.) *Difficult Sucking, particularly in Cleft Palate*.—The act of sucking consists in the lips locking themselves hermetically around the nipple; the air in the mouth becomes rarefied by the dilatation of the thorax, and the milk is in this manner pumped out from the breasts. But, when the continuity of the lips is broken, they are unable to firmly and perfectly adapt themselves around the nipple, and infants are then incapable of exhausting the milk. When the hard palate is not simultaneously fissured, children will grasp the nipple between the jaws, instead of the lips, and in that way suck with tolerable ease. But when cleft palate is also present, then they are almost altogether unable to nurse; the overflowing breasts do indeed discharge some milk into the mouth, but the greater part flows out again at the nose; this is best prevented by holding the head of the child elevated.

(2.) *Obliquity in the Position of the Teeth*.—If the operation is not performed before the eruption of the teeth, or if it has been unsuccessful, the teeth of that part of the jaw that is not covered by lip will grow crooked, outwardly instead of downward; this is especially true when cleft palate also exists, which gives to the face a hideous disfigurement.

(3.) *Indistinct Speech*.—Some letters, to the articulation of which the upper lip is indispensably necessary, principally B, M, P, W, are but indistinctly pronounced in harelip, and are altogether impossible of articulation in cleft palate. In the latter case, all the other consonants in addition lose in distinctness on account of the defect of the palate.

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