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# Obstetrics: The Science and the Art - Part III. The Therapeutics and Surgery of Midwifery; Chapter XXII. Milk Fever

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## CHAPTER XXII.

## OF MILK-FEVER.

THE mammary glands, which in the virgin state are small and to a great degree undeveloped, participate in the new movements of the constitution that are established in the pregnant woman. The tissue of the glands begins early to expand, and the breasts become sensibly larger very soon after the conception takes place; the areola and nipple assume a darker hue, and indeed turn almost black in some persons. These changes do not take place without producing a sense of soreness or aching of the part. So great is the increase of vital force, that some women find a considerable secretion of milk in the breast, as early as the sixth, seventh, and eighth months; but, for the most part, no milk is formed so soon. If a healthy woman should miscarry at five months and a half, it is to be expected that her breast will fill with milk within seventy or eighty hours after her delivery, and, *à fortiori*, secretion may be expected if she be confined at the sixth month or later. I have seen a woman whose child was born at five months and a half, who served as a most excellent wet-nurse. I have found milk in the galactophorous tubes of a young woman, whose body was exhumed for examination by a jury, although she had been confined at a little past five months. During all this time, the organ, though more firm and protuberant than in the non-gravid state, does not become positively hard, but is soft and yielding under pressure; for the increased size is owing more to an increased deposit of adipose matter on the breast exterior to the fascia of the gland, than to the swelling, enlargement, or engorgement of the glandular tissue itself, at this early stage. Such are the phenomena relative to the breast in pregnancy.

Let us now endeavor to account for them, by a reference to the internal structure and uses of the apparatus which nature has arranged for the support of the new-born product of the gestation.

The breast appears at an early stage of the foetal existence, but does not become prominent until the period when the girl is passing

into the womanly state, and even then the substance of the gland is more solid and condensed than when prepared for the production of milk. The adipose structure is very abundant upon the breasts, so that, in general, fat women have them of great size, without at the same time having a larger share of the glandular material than some other women of a meagre constitution; and, indeed, it does not appear that the largest breast is to be depended upon for the production of the greatest quantity of milk. A breast of middling size is to be preferred in choosing a wet-nurse.

A layer of adipose matter is to be found immediately under the skin in dissecting the breast, and this adeps exists there in masses or lumps, separated from each other by cellular digitations, which unite the skin to the parts beneath it. Underneath the fatty layer are to be found the lactiferous glands inclosed in their true fascia. The whole gland is so formed as to resemble somewhat a placenta, being circular, thinner at the margin than at the centre, and consisting essentially in a great number of small grains, the size of millet-seeds, which are inclosed in separate packets or bunches by the cellular laminæ, which thus break it up into lobes or nodules, each, as it were, inclosed in a cellular fascia. The exterior surface of the whole gland is inclosed in a condensed cellular texture, which constitutes a fascia for it, but is far more ductile or distensible than the fascial coverings of some other parts of the body. The gland thus constructed is supplied with blood from the intercostals, the external mammary, and the internal mammary arteries. The nerves of the breast are also derived from the intercostals and from branches that proceed from the axillary plexus.

It has also an abundant supply of absorbents. The granules of the breast, or its acini, give out, each of them, a tube or lactiferous duct, which uniting with others from the same bunch or packet of grains, at length form a lactiferous duct which proceeds towards the areola and nipple, so that each packet or nodule of acini sends its own excretory tube to the nipple, and has no connection with the circumjacent nodule. In the same manner the lobuli of the placenta send, each of them, its vessels towards the cord without communicating with the adjacent lobules.

The lactiferous ducts soon become, by the union of so many primitive excretory tubes, quite large reservoirs; and they become the larger, the nearer they approach the areola and nipple, within which they contract or grow narrower: each tube sends its own duct to the nipple, on the extremity of which it opens, in order to pour its fluid into the infant's mouth, when it is drawn forth by the suction.

It is stated by Haller, in his great work, and confirmed by other

and later writers, that, in addition to the lactiferous tubes, which may be regarded as the efferent ducts of the acini and the packets, the galactophorous vessels are also composed of numerous excretory or efferent ducts, which take their origin from the adipose cells, and convey thence a material that helps to make up the constitution of the milk. I do not know that this question has been settled by any of the minute anatomists in America or elsewhere.

The number of tubes opening on the extremity of the nipple amounts to fifteen or twenty, and each tube is lined, according to the opinion of Bichât, with a mucous membrane, since, he says, the orifices of all the glands are furnished with a mucous surface.

Such being the construction of the mammary gland, it follows that its nervous and vascular apparatus, having extensive communication with the rest of the system, must endow it with the faculty of awakening numerous and powerful sympathies in its diseased affections.

The woman who approaches the term of her gestation feels the breasts grow quite heavy; they are rather firmer in consistence; the areola becomes blacker and blacker as she approaches her accouchement. After the child is born, she observes no change in them until the second, or more commonly the third day, so that, until forty-eight or seventy-two hours have elapsed, we have no reason to look for any fluxional movement in that direction. But about this time the breasts commence swelling; they ache, and suffer shooting pains throughout their substance; the swelling goes on until the skin of the mamma fairly shines with the tension; blue veins, that are very broad, are seen creeping in every direction over the superficies of the hemisphere, and even the nipple partakes of the engorgement. The breast is now painful to the touch, and each one stands out so firmly and so hard from the thorax that the woman is often obliged to lie upon the back for more than an entire day, being unable to bring her arms together on account of the pain the breasts would suffer from their approximation.

In this state, the breasts may be compared to two great phlegmons upon the most sensitive part of the body, and we need feel no surprise at finding such a state of the glands accompanied with rigors and fever, and even violent fever. Accordingly, it is very generally the fact that a woman does not get her milk without, at the same time, getting a fever with it, and this fever is called the milk-fever.

I have, however, not the least doubt that on various occasions I have observed the beginnings of a fever, which proved to be the milk-fever, in which, during many hours, not the least appearance of increased engorgement, heat, or painfulness of the breast was dis-

coverable, signs which soon afterwards manifested themselves, and which, together with the usual termination of the fever in copious perspirations, after the usual course of nineteen or twenty hours, left no doubt upon my mind that the fever was milk-fever.

In a good moiety of the cases, this, like other kinds of ephemeral fever, is ushered in with rigors, headache, and pains in the back and limbs. These pains are often intense; but the true type of the fever is that of an ephemera which declines after a short and violent hot stage, that gives place to a copious sour perspiration.

If not before, then as soon as the milk-fever begins, the patient ought to take some aperient medicine, such as castor oil, salts, Seidlitz powders, or salts and magnesia. It is always cooling and calming for a feverish patient to have the bowels moved freely, and in this particular fever it is highly commendable to be watchful against any excess of violence in the febrile excitement. For my own part, when I find in a milk-fever that the pulses are strong and large and frequent, the calorific functions highly excited, and the head and back and limbs aching, I rarely fail to let blood from the arm. This is the surest and most prompt method of relieving the present distress, and by far the most certain means of obviating the dangers which accompany all fevers in a newly-delivered woman.

As I have said above, it is the nature of the fever to be ephemeral; yet it but too often happens that this ephemera is converted into a long-continued fever or a remittent, during the course of which various organs, and particularly the peritoneum and the womb, are excessively liable to be attacked.

To take eight or ten ounces of blood, then, and to give a smart purge, is a very safe and commendable proceeding in all cases of milk-fever that are a little severe.

I had, not long since, a young lady under my care in her first lying-in. The labor was very painful, and lasted about twenty-four hours. On the third day, she had a rigor, heat, swelled and painful breasts, and a great quantity of milk. Instead of going off in eighteen hours, this fever lasted nine days, when there was a complete *solutio morbi*. I supposed her to be now well; but no—she was attacked next day with all the symptoms of endocarditis, from which she barely escaped with her life. As the endocarditis went down, it was followed by a couple of very large and painful swellings, one over each sacro-iliac junction, both of which seemed to be doomed inevitably to supuration. During the existence of these swellings, she had constant hectic; but both of them were slowly and with difficulty discussed, after which she regained her health most perfectly, having lost her

milk. For several days the friends of this lady despaired of her cure, and she suffered the most distressing pains and weakness. Now, I have related this case to show what may become of the most simple form of milk-fever, and the necessity of observing it, not so much on its own account as on account of the conversions and depravations to which it is liable.

I think that one of the fruits of the statistical methods which have become fashionable of late years is the establishment of what, perhaps, might be properly called pathological Ontology. It seems to me that the tendency of modern writings is to make the Student and early practitioner believe that each disease is one and the same, saving the modifications that occur in *its* phases, from beginning to end. I presume, however, there are few practitioners who, from age and much clinical experience, have become familiar with the changes that take place in the diseased constitution, who are not aware of what has been called by a writer the "conversion of disease."

A disease may begin in the alimentary apparatus, and end as a disease of the respiratory apparatus; a curable disease of the brain may, during its existence, introduce modification of the health of the respiratory organs, which being curable, nevertheless, during its existence, brings about maladies affecting the kidneys, the spleen, the liver, or other noble parts of the body. It is difficult for me to conceive of a person dying of a single disease, for I firmly believe that life consists in the trinity of powers residing in the circulatory, oxygenating, and innervating organs; I am not surprised, therefore, to find a patient, who being seized with a rigor, the consequence of an overloaded or irritated mammary gland, is subsequently attacked with inflammation of the broad ligaments, uterine veins, or peritoneum, in consequence of the increased simple momentum of the blood, and modifications of the nervous force dependent upon the febrile condition. I need say nothing as to the changes in the crasis, or the mixt, of the blood itself, effected by the violent threshing force of the ventricles and the impetuous rush of that fluid through the arteries and capillaries of the body.

When, therefore, I find a lying-in woman with a synochus-fortis pulse, notwithstanding I regard a state of the mammary gland as the cause of the phenomenon, I tremble lest the force of the circulation should overcome the feeble barriers which the physiological condition of the fatigued and exhausted child-bearing organs offers against its violence.

I, therefore, make haste to reduce the violence of milk-fever within

safe limits, by employing the only sure and the most effectual of all therapeutic resources against it, to wit, a venesection.

I deem it advisable to say here that, whereas the practitioner occasionally meets with seasons in which the constitution of the air highly favors the occurrence of childbed fevers, he ought, as soon as he discovers such a propensity among his lying-in patients, to put not only the nurses who may be under his guidance, but also some of the responsible members of the family, upon their guard, in order that the very earliest intimations may be given to him of the attack of milk-fever. This is rendered necessary by the circumstance that milk-fever begins with intense rigors, and even with shaking ague, in many cases; and that it ought always to be regarded as uncertain, for puerperal women, where the blow may fall whose first signal is a chill. It may fall safely and harmless on the gland of the mamma; or it may descend with irresistible and destructive violence on the veins of the womb or its muscular structure; or it may light up a broad and raging flame of inflammation in the whole peritoneal membrane. How needful is such a precaution, in view of the exigent demand for a bold, prompt, and liberal use of the lancet!

When the breast is filled with milk to distension, the whole organ becomes heated, and of an increased sensibility. This excitement, of course, extends to the areola and the nipple. This last-mentioned organ is also subject to be contused by the action of the child's gums, betwixt which it is pressed with considerable force: besides this, the suction power of the infant's mouth, equal to a weak cupping operation, attracts into its vessels a great quantity of blood, which, by frequent repetition of the suction, establishes at last an engorgement, and even a positive inflammation of its skin and areolar tissue. The nipple, once inflamed, is readily excoriated by the suction and friction to which it is exposed, and thus is established that painful affection called *sore nipples*. Sore nipples may be an affection either of the cylindrical part of the nipple or of the extremity of the organ; the former is of less evil consequence than the latter. When the mass of the nipple has once become inflamed, hard, and highly sensitive, it is common to find a quantity of exudation matter, like croup membrane, adhering to the very extremity of the mammilla: when this exudation matter falls off, the surface is left raw, having lost its epithelial covering. If the child be not frequently applied, and the gland be very productive, the heat, painfulness, and tension of the whole breast are distressingly aggravated by the collection of milk within the galactophorous canals. There is no hope under these circumstances that the swelling and tenderness of the mammilla shall become less; the

causes act and react mutually, and the inflammation, turning inwards upon the milk-tubes of the nipple, spreads by continuous and contiguous sympathy into one or more of the large reservoirs, which are already over-distended, and, therefore, in a morbid state. The foundation for mammary abscess is very commonly laid in this train.

For the most part, excoriation occurs near the base of the nipple, in a fold or wrinkle of the skin which half encircles the part, and which, when placed in the child's mouth, is to the most exquisite degree painful. Tears are seen to roll down the cheeks of the patient every time she takes her nursling to the breast; and she comes at last to lose her spirits and grow moping and melancholy, to such a degree as greatly to retard her convalescence, or even cause an attack of fever of a serious nature.

There can be no surer proof of the difficulty of curing any disorder than that drawn from the vast variety of remedies for it. It is well known that the remedy for intermittent fever is the Peruvian bark, or its preparations—everybody is agreed on that point: so also mercury is a proper remedy for lues—which few persons doubt. But, as to sore nipples, the whole world seems to have been ransacked for *cures*, and in a thousand lying-in rooms we shall find a thousand different *cures*, which, after all, are not capable of curing the malady. For my own part, I do not believe in the cucumber ointment, so praised by Velpéau, nor the unguentum populeum, nor the lead-water, nor the castor oil, nor the borax and brandy of Sir Astley, nor the infusion of green tea, nor the slippery elm bark. I make it a point to examine the sore nipple for myself. If I find an excoriation or an ulcer seated upon a nipple actually turgid with inflammation, and highly sensitive to the touch, I advise some blood to be drawn by a circle of leeches set on the white part of the breast just beyond the areola. This leeching, followed by an emollient poultice of flaxseed mixed with crumbs of bread and milk, to cover the whole nipple and areola, is soon followed by a reduction of the inflammation. When that is subdued, the crack, fissure, or ulcer begins to heal very kindly under the gentle stimulation of a weak solution of nitrate of silver. But one might vainly try to cure the ulcer before the inflamed base on which it rests is cured. When the substance of the nipple is cured, the sore on the surface will heal for anything or for nothing. After the nipple in substance is relieved, the cucumber ointment, or a true pomade, made with scraped pippins stewed in prepared lard or any proper basis of an ointment, causes the cure to be soon effected. As this ointment is a very useful one in many occasions of disorders of the breast, I will not refrain from giving the Student the following formula

for its preparation; and though I am no great believer in the virtues of salves, I shall not blush for having descended to so small a particular as this. I beg leave to add that, as the ointment cools, it should be constantly stirred or moved with a wooden spatula, which serves to give it a granular character.

Take of—White wax two ounces;  
 Deer's suet six ounces;  
 Oil of almonds two ounces;  
 Scraped pippins four ounces;  
 Dried currants two ounces;  
 Alkanet one drachm.

Mix.—Melt in a water-bath, and simmer for a sufficient length of time; strain the hot liquid, and beat it in a mortar or on a slab to make a proper ointment, stirring until the ointment is cold.

In those cases where the pain is very great, a present means of relief or palliation is to be found in touching the sensitive part with lunar caustic, which, though it smarts for a few moments, is soon followed by a diminution of the sensibility and pain. Let the caustic touch only the excoriated part; if it act on the parts not already excoriated, abrasions of the sound epithelium follow, with a corresponding enlargement of the sore.

In applying the nitrate of silver, one should use a very fine-pointed camel's-hair pencil, which, being moistened with water, may be touched with a portion of solid nitrate, until the water in the brush shall have taken up a sufficient quantity of the salt; with this delicate point, the cracks or fissures, being slightly stretched apart, may be accurately touched on the granulations, so as to avoid the risk of destroying by the caustic the tender margin of cicatrization whose white band girdles it; to take a thick piece of solid nitrate is to put off the cure for a whole day longer, which is a great evil.

The late Dr. Physick, whom I consulted in regard to a most painful excoriated nipple, taught me that I should cure the lady as I would cure an incised wound or any ulcer—that is, by bringing the edges as nearly as possible into contact. A bit of fine ribbon, called *taste* by the shopkeepers, was thinly spread with adhesive plaster; and very narrow strips of the plaster, several inches in length, having been prepared, were applied in a direction transverse to the fissure or crack, so as completely to close the wound or ulcer; the strips were removed for the purpose of giving suck, and always replaced immediately afterwards. The method of the good surgeon was rapidly and completely

successful, as I have found it to be on numerous other occasions since that time.

During the process of cure of sore nipples, very great comfort is obtained by causing the child to suck through an artificial nipple, made by covering a proper shield of pewter with the prepared teat of a heifer. Such artificial nipples are prepared in great perfection, and sold by the apothecaries in this city. They prevent the direct contact of the child's gums and tongue with the diseased organ, and thus allow the parts to heal with great celerity in some instances. It sometimes happens that the child refuses such a nipple; but in the great majority of cases the infant takes it well, and the pain and inflammation soon afterwards disappear. There is also a variety of shields or caps for covering the nipples, in order to prevent them from being pressed or rubbed by the dress of the patient.

When the breasts are filled with milk, their lactiferous tubes are liable to over-distension to such a degree as to excite in them an inflammatory action. They are also, in this state, liable to injury from the pressure of a tight dress, or from the use of a dress so loose as to allow the heavy organ to be suspended by its own tissues, a thing painful and irritating to the last degree; or the breast is exceedingly liable to be injured by the mother lying upon it in her sleep, or by the child bruising it by bumping its head against it. Lastly, as I have already said, the irritation of a sore on the end of the nipple is readily propagated along the course of the milk-tubes into the substance of the breast, so as to produce there a more or less violent inflammation. Cold and damp air, to which the woman sometimes imprudently exposes the organ while in the act of suckling the child, especially if while in a state of perspiration, is a pretty frequent cause of the difficulty; and, indeed, there are to be met not a few females who possess what may with great propriety be called an irritable breast, and to such a degree that the slightest exciting cause, as cold, pressure, distension, or the like, establishes the inflammatory action at once. Some people are so plagued with frequent attacks of milk-fever or weed, that they are compelled to wean the child, in order to get rid of the milk and the irritability which it brings along with it. I know a lady who has had the breast so irritable that, whatever cause happened to excite a too active movement of the blood in the vessels would seem sufficient to establish so great an affluxion to the breast as to inflame it to her great distress, trouble, and disappointment.

The Student ought to be made to understand that, after entering upon the practice of physic, he will very often be called on to give his opinion for nursing women, whom he will find complaining of

headache, pain in the back and limbs, with a very frequent, full, and hard pulse; these symptoms having been ushered in with a chilly fit of one or two hours' duration. He will rarely fail, under such circumstances, to make at once a correct diagnosis, if he asks the question, whether there is pain in one of the mammary glands; and if answered in the negative, let him not give up the inquiry, but let the gland be pressed betwixt the thumb and fingers. If there is any soreness there, it will in this way be readily detected. A small lump is very likely to be found, as big as a nutmeg or larger, which alone is sufficient cause and explanation of so much constitutional disturbance. The inflammation and obstruction of a single galactophorous tube are sufficient to produce chill, fever, cephalalgia, and pains in the limbs, like those of break-bone fever.

Whenever this milk-fever, or fever arising from an irritated state of a part of the mammary gland, is very great, the patient ought to be bled. Eight or twelve ounces will mostly be enough for one operation; a smart purgative should be afterwards given; the patient directed to put a poultice of milk and bread upon the painful part of the breast, and to keep her bed. It would be most unfortunate for her to refrain from suckling the child, which ought to go to the breast whenever it is found to fill up with its milk.

In the course of a few hours after the bleeding and the operation of the cathartic, fifty or sixty leeches should be applied near the painful part, unless the local disorder should by that time be greatly reduced in intensity.

These leechings are highly useful, and ought to be repeated daily in those cases which seem not to require or admit of the employment of the lancet, but which at the same time demand the local abstraction of blood. In one patient here, I had a large number of leeches applied to the breast; they were useful, but did not cure the pain and obstruction. The leeching was repeated seven times before the inflammation gave way. In a subsequent confinement, they were applied nine times before they succeeded in relieving the distended, hardened, and painful tissue of the breast.

It may be said, the mammary gland is suspended upon the skin in front of the thorax: whenever it becomes heavy from engorgement or from obstruction of its milk-tubes, it tends to fall downwards from its weight, and in doing so the natural relations of mutual tension of its integral parts are disturbed, I might say destroyed. To explain myself fully, I will say that the gland is dragged, pulled by its weight, and that the nerves and bloodvessels of supply are put uneasily and even

pathogenically to the strain, just as happens to the testis in a hernia humoralis.

As I think no surgeon would, at the present day, treat a hernia humoralis without the aid of a suspensory bandage, so I am equally sure no thoughtful practitioner would undertake to treat a violent case of mammary inflammation or mammary abscess without providing some proper means of suspending the organ, or preventing its fall downwards. A fasciola or strophium of some sort should be resorted to in every such case; and I advise the Student to make use of a fasciola or strophium consisting of a strip of patent adhesive plaster, sixteen or eighteen inches long, and little more than an inch in width. Let one end of this adhesive strip be carried far back and high up under the axilla, and fixed to the skin there; then let the breast be raised up by the hand to its normal position, and while so supported, let the plaster strip be brought round underneath the hemisphere, and carried upwards until the end applies itself as high as the opposite clavicle. One such strip will be in many cases found sufficient to cure even a violent inflammation of the mammary gland, just as a considerable orchitis is often cured by a suspensory bandage alone.

I exhort the Student of Medicine to make himself well acquainted with the uses of the breast, the nature and sources of its circulation; its innervation and absorption, as well as its secreting office, to fully prepare himself to combat the ills that menace those who confide to his skill and conscientiousness the preservation of their health in the lying-in room. It is difficult to conceive the amount of poignant distress, depression of spirits, and actual illness attendant upon some of those cases of mammary abscess which, from beginning to end, occupy months, besides ruining the gland, to the great detriment of the patient in future confinements. A mammary abscess, which is a very serious matter, demanding a conscientious regard to the fulfilment of all the duties incumbent on the practitioner in the case, is often treated with neglect and indifference.

Lying-in women being mostly managed by their monthly nurses or friends, it is difficult for the physician to make either the patient or her attendant understand the true wants of these cases. I am sure that a great proportion of the mammary abscesses that I have met in my life, have been the direct results of over-distension of the milk-tubes; nor can I well understand that one, or a dozen galactophorous tubes, or milk reservoirs, as large as swan-quills, should be filled with milk to their utmost capacity, for several hours, without determining in their mucous and fibrous structures a hyperæmic and hyperneuric condition, to result in inflammation. But such inflammation passes through

such tissues to the gangue or basement of cellular tela by which they are invested ; heat, swelling, pain, and redness of the parts follow such engorgement in the course of a few minutes, or certainly in the course of a very few hours : this condition is likely to be aggravated by the increased distension which a failure to draw off the milk, whether from ignorance or timidity, invariably produces.

I believe the Student cannot possibly become too vigilant and anxious to explore, and understand the mischievous tendency of the engorgement now spoken of : he should give such directions as to emptying the breast, either by the aid of the nipple-tube, the breast-pump, or other method, as may save his patient from the distress of a mammary abscess.

A mammary abscess for a lying-in woman is a great misfortune ; it almost deserves to be called a catastrophe ; and for a woman, indeed, who has had a bad constitution, or one with a strumous habit, or one prone to tuberculosis, a mammary abscess is a circumstance replete with alarm and danger. If the suppuration be very deep-seated, it sometimes happens that many days, or even weeks, are passed before the matter of the abscess makes its way to the surface. In the mean time, a constant fever, exhausting perspirations, and a state of the constitution that can only be truly characterized as hectic, attends the painful and reluctant progress of the suppuration outwards. But, suppuration, when it takes place, often attacks several of the different loculi in which the independent packets and bundles of the milk-tubes, and the granules of the gland, exist ; so that a woman is affected with an abscess which is really multilocular in its nature, and which, when evacuated, allows the cavity to be converted into winding and many-celled sinuses, difficult to cure, and often lasting for weeks and months. I need not allude to the exhaustion, the pain, the hectic fever, and the wasting discharges of suppuration. It is, indeed, a deplorable circumstance for a lying-in woman to be attacked with a mammary abscess, and particularly as regards the great domestic vexations often produced by it. The young child is often the victim of such an accident, and the whole household is in some instances kept in a state of disquietude for an entire year, by the dissatisfaction engendered from the necessity of frequently changing the wet-nurse brought in either to relieve the woman herself, or to preserve the child from the risks connected with its artificial alimentation.

An abscess is a circumscribed cavity containing pus. One of the chief causes of the pain that attends it is the tension, and it is desirable that its character as abscess should be abolished as soon as it may be done conformably with the interests of the patient. When the sac

is opened by a bistoury, or by the natural process of absorption, it ceases to be an abscess and becomes a deep ulcer; the tension and pressure are, thenceforth, either greatly lessened or wholly removed. In the treatment of mammary abscess, however, it appears to me not desirable, in general, to draw off the matter from a great depth below the tissues, because, in doing so, the fistula, through which the matter escapes, and which is made by the lancet, is almost sure to become sinuous, and convert the abscess into a fistulous ulcer. Hence, I should deem it advisable, in the conduct of such cases, to wait rather longer than in some other abscesses, for the rising of the pus to a point near enough to the surface to obviate this risk.

During the progress of the suppuration, great comfort is obtained, first, from supporting the gland by means of the adhesive fasciola, or strophium; and secondly, from dressing it with emollient poultices. I think that poultices are more useful if they contain the petals of chamomile, or hops, or crushed onions; for the use of these agents, as it appears to me, serves to prevent the formation of those eczematous blotches and patches which are apt to follow the simple poultice of bread and milk, of flaxseed, of slippery elm, or other emollients. I do not think that anything can be more suitable for the treatment of this part of the case than the poultice composed of equal parts of slippery elm flour, flaxseed meal, or crumbs of bread and chamomile petals. As soon as the breast is opened, whether spontaneously or by the surgeon, poultices may be abandoned, and a practice introduced of compressing the breast against the arch of the ribs by long narrow strips of adhesive plaster, which cross it in various directions, take firm hold on the thorax to compress it, and hold it still. The effect of the compression is to counteract the development force of the still remaining uncured inflammation of the tissues.

There is no antiphlogistic that can compare with the power of mechanical compression for cases in which it is possible to adjust it; and it is possible to adjust it for the female breast. Every day, during the treatment, and indeed several times a day, a delicate cereole, made of cerecloth, should be introduced into the opening, and conducted to the bottom of the tube or sac. If the cereole be not disproportionately large, it gives no pain, and its withdrawal is followed by gushes of pus or sanies, whose detention in the bottom of the tube or sac reconverts the malady, restoring it to the nature of an abscess, for an abscess is a circumscribed cavity filled with pus.

It appears to me, that, managed in this way, there will be found few samples of gathered breast obstinately to resist the treatment.

In many instances where the suppuration makes its way to the sur-

face, within or near to the margin of the areola, milk is found to escape along with the pus, and a troublesome milk-fistula is generated by it; sometimes these fistulas of milk continue to flow for a great many weeks accompanied with a very small quantity of purulent matter, and a portion of sero-pus or sanies. To shut up the orifice with adhesive plaster is to re-form the abscess, since it reproduces a circumscribed cavity, and the abscess opens again and again—a cause of great vexation. I have found them, I think always, yield upon the daily introduction of a delicate cereole, made of cere-cloth, which should be carried to the bottom of the cavity, and withdrawn from time to time to allow of the escape of the contained fluids, but to be replaced immediately afterwards. It generally happens very soon that the cereole goes less and less deep into the tube, which, filling up with granulations from the bottom, at length precludes the possibility as well as the necessity of its introduction—for the fistula is cured.

In the winter of 1840, I attended a lady confined with her first child. She was so extremely modest that, several days after the birth of the infant, being seized with inflammation of part of the gland of the left breast, she would not allow the nurse to inform me of the accident, lest I should wish to examine the part. In this way, she continued to bear the pain for several days, until it became so great that my attention was called to it. I advised the use of leeches. Compliance with this order was deferred for two or three days, and when at last yielded it was too late to do any good. The breast suppurated near the posterior surface, almost down on the fascia; the pus was long making its way to the surface, which it did at length, and was evacuated by an incision. The case altogether was rendered a most embarrassing one by the timidity and nervousness of the patient, who became so very ill as to excite in me the most painful solicitude. I was for many days anxious on account of a very wearying short cough, for which I could discover no explanation upon a most careful auscultation of the thorax. The pulse was always above one hundred and ten. Upon going to see her one morning, I found her with the most singular respiration and pulse that I had ever seen connected with any exterior disorder of the breast. Her pulse was not less than one hundred and sixty beats a minute, and the respiration was more than one hundred times a minute. Her hands were covered with moisture, and from her emaciation, I felt the greatest inquietude upon finding so strange a state of her circulation and respiration, which, she told me, had come on shortly before, having been of the same character once or twice some hours previously to my visit.

After looking upon this strange scene for a minute or two, and after repeating the auscultation, I begged permission to examine the breast, which had been more painful. I found a new abscess pointing up under the skin. As soon as I opened it, and with a bistoury cut up a bridge of skin which strongly bound two other orifices, her strange respiration instantly gave place to a very calm and deliberate one, while her pulse also recovered a far more natural rate. This lady, having lost all her milk, took in a wet-nurse, and after some time recovered a very perfect health, after the most distressing and protracted illness brought on by a simple, but neglected, inflammation of the lactiferous gland.

In the second volume of *Bright's Medical Reports*, p. 459, there is related a case of what he calls hysteric dyspnœa.

"I was passing," says he, "through the wards of George's Hospital one day during last winter, when one of the surgeons requested me to look at a female patient who had a formidable disease of the mamma. She had been seized with alarming dyspnœa: her respiration was performed with most unusual effort, but it was not so much hurried as laborious; and she complained of a constriction across the chest, which was altogether unconquerable. Pulse very quick. It had been believed by some that she suffered an attack of pneumonia; but there was no cough, and the breathing was rather with effort than with pain or difficulty. Her feet were quite cold; her pulse weak. She was in a state which might have resulted from sudden effusion into the chest, or the bursting of an aneurism. This was hysteria, and assafoetida was its cure."

I wish the Student to compare Bright's case with mine given above; the slowness of the respiration in his with the frightful acceleration in mine, and all coexistent with formidable disease of the mamma; and then observe that my patient was instantly and completely relieved by the bistoury, while Bright's was cured by assafoetida. I should think he would come to the conclusion that neither of the cases was really to be arranged among the hysterical disorders, but was the result of irritation of a gland, having so large a supply of nerves from within the thorax itself.

It is highly advisable to wean the child, when sufficient time has been allowed to ascertain the probable long duration and great severity of a mammary abscess. This ought not to be done too early, because the suction of the breast by the child is a great and curative resource in the management of the disorder: when the inflammation confines itself to only a part of the breast, the other portions of the gland continue to furnish a good abundance of milk, and that milk ought to

be regularly taken away, lest its accumulation should add to the difficulty already too great within the inflamed packets, or even invite the inflammation into the still healthy structures.

For *counter-sunk nipple* and *inverted nipple*, I refer the Student to my letter on the Breast, in my work on *Woman, her Diseases, &c.*, p. 673. To the same letter I beg leave to direct his attention for a fuller statement of this subject than I find occasion to present in the present volume.

I shall close this article, by advising every Student who intends to practise Midwifery, to dissect the breast for himself, after having most carefully studied "*The Anatomy of the Breast*, by Sir Astley Paston Cooper. London, 1840, 4to., with a vol. of Plates." This work is really a legacy to those whom, in his dedication, he calls "My dear brethren." It is prepared with an elegance, and liberality, and profuseness of illustration worthy of that great surgeon. The republication of it in the United States, in a style fully equal to that of the London edition, has conferred a benefit not only on the profession, but on thousands of suffering females, whose disorders of the breast would be more fully understood, as soon as that work should find its way, as assuredly it would, through the country.