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DISEASES

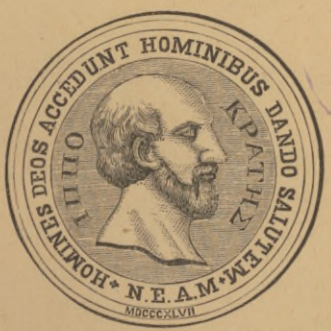
OF THE

MAMMARY GLANDS DURING LACTATION.

BY

SALVATORE CARO, M. D.,

[*FROM THE TRANSACTIONS OF THE NEW YORK ACADEMY OF MEDICINE FOR NOVEMBER*, 1874.]



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DISEASES OF THE MAMMARY GLANDS DURING LACTATION.

By SALVATORE CARO, M. D.

Read November 19, 1874.

The most remarkable phenomena regarding lactation following delivery are milk fever, enlargement of the mammæ, and the milk secretion. This enlargement and secretion of the breasts, although often observed at the beginning of utero gestation, cannot be considered as the true process of the milk secretion necessary to the support of the infant, but rather as a sympathetic uterine action, considered by many writers as a pathognomonic symptom of gestation.

The three above-mentioned phenomena, which are often ushered in simultaneously, are observed between the third and fourth days (seldom later) after delivery, when the pulse becomes accelerated, the temperature rises, the patient feels thirsty, suffers intense headache, with occasional chill, the lochial discharges disappear (to return at the end of this stage), the mammæ become enlarged, very hot, painful, and sensitive to the touch, indicating the secretion of milk as having commenced to take place. This febrile stage, which is considered by all writers as not only normal, but necessary to the secretion of milk, has been called milk fever, and lasts from twenty-four to thirty-six hours, leaving, at its disappearance, the properly-formed milk secretion; and with it the duty and high office allotted to woman of nursing her offspring.

In reference to this high office, however, before entering into its discussion in this paper, I beg leave to say that, in

spite of all the dictates of Nature and the teachings of those philanthropists predisposed to assert speculative notions, it is often observed that the delivered woman not only cannot perform the duty to which the majority of mothers are naturally compelled, but that their persistence in such obligations may be fruitful of harm to both mother and child, as it is often observed that a weakly-constituted mother, with a chronic malady, or a marked predisposition to such, or tuberculosis, is the counter-indication to lactation. In fact, delicate women, from the beginning of lactation, feel a sense of general extenuation of suffering at the thorax, shoulders, and hypogastrium, loss of appetite, rest, and cheerfulness; become fretful and peevish, and, if the milk does not cease to secrete, a general emaciation will soon follow, and compel them to abandon the task.

Another class of women, losing their strength in consequence of excessive labor, mental excitement, extra care given to their children, particularly at night, having no opportunity of seeing them through the day, or by reason of scanty nutrition, are compelled to relinquish their natural obligations. Fashion, also the ambition of preserving a fresh appearance, and many other reasons, often prevent the mother from nursing her infant, and compel the physician to guard her against such a procedure; but when the woman is healthy, and surrounded by all the appropriate hygienic conditions, nursing is a paramount duty which the mother should perform without fear of any ill effects upon the constitution, as it rather imparts vigor and strength; it being often observed how, under such circumstances, a woman will look fresher, enjoy better health, and lose all tendency to various affections.

As I have just said, the mammary glands are predisposed to a fluid secretion, varying in quantity and quality from the beginning of utero gestation to confinement, undergoing various changes before reaching a perfect milk composition; the true secretion, however, does not take place until a few days after confinement. From the first to the third day the glands remain almost in the same condition as before confinement,

secreting but little semi-aqueous fluid, of a whitish color; from this period, colostrum and a milky fluid, of yellowish, lemon color, thicker than the former, are freely secreted until the fifth or seventh day. At this stage, the phenomena indicating the milk secretion having passed away, the secreting fluid gradually becomes clearer until the tenth or fifteenth day, at which time it has assumed the proper color, consistence, and qualities, of pure milk. During puerperium, or at any time while lactation continues, women may be affected in the mammæ in various ways—namely, with anomalies of secretion, galactocele, sore nipple, engorgement of the glands, phlegmonous inflammation, mastitis, and painful nursing. In reviewing these various affections, I will commence with the least dangerous and explain.

These anomalies may be divided into agalactia and galactorrhœa.

Agalactia, or the absence of milk, which is supposed to be independent of the will of woman, may be complete or incomplete. It is complete when the milk totally ceases to secrete, and incomplete when partially, or not enough to support the child. Moreover, agalactia may be primitive, as when caused by an incomplete development of the glands, atrophy of the adipose tissue, or by defective nervous vital energy of the same; and consecutive or accidental, which may be caused by defective or unhealthy nutrition, want of constitutional power, acute or inflammatory diseases, organic maladies, exposure to cold, astringent applications to the breasts, fever, eruptive diseases, excessive discharges, whether lochial or leucorrhœal; passive hæmorrhages, either during pregnancy or after labor; moral influences, as sudden fright or terror, anxiety of mind, unpleasant news suddenly communicated, grief, depressing passions and emotions, disappointment, vexation, anger, and many other unexpected causes. Either of these forms of agalactia may be recognized by the flaccid condition of the mammæ; or by the emaciated appearance and continuous crying of the child. Of the above anomalies none are invariably a detriment to the mother, except the acci-

dental, particularly when the arrested secretion affects the crasis of the blood; but they are always very injurious to the child, as they deprive it of the proper nourishment.

The treatment of primitive agalactia is limited, and affords but little benefit; nevertheless, that by galvanism, proposed and experimented on by Aubert and Becquerel, and recently the faradaic current, indicated by many others, have rendered valuable service to medicine and the sufferers. In accidental agalactia, the topical remedies recommended by Desormeaux and others are the fermentations of decoctions, prepared with anise and fennel root, cascarilla bark, and also poultices of lentils. The most reliable remedy, so well known and so much used by and among Italian women, is the poultice from the leaves of the *Ricinus communis* (castor-oil plant). In the absence of the leaves, poultices of the powdered beans will replace the former. The following case, as an illustration, will justify its narration:

Miss B., aged twenty-four, healthy and robust, with well-developed breasts and nipples, primipara, in the winter of 1860, while in the seventh month of utero gestation, became affected with small pox of a very confluent form, through which she lost considerable strength, and the breasts, which were full of lacteous fluid from the beginning of pregnancy, during her sickness withered away, leaving no signs of milk. At full term she gave birth to a healthy boy, but when put to the breast no milk was found. For several days the trial was occasionally repeated, in order to stimulate the gland and start the secretion, but to no effect. Nourishing food with plenty of beef tea was given, and, though in consequence she fully regained her strength, no milk appeared. On the fifteenth day after confinement, all other efforts failing, a trial was made by the application of castor beans. It being winter, and impossible to obtain leaves either fresh or dry, but remembering the good effects secured by the poultice of castor beans in a similar case during the winter of 1848, I determined to make the trial, and, after the third day's use, I was agreeably surprised by the appearance of milk, which continued to the end of lactation.

When the form of agalactia has affected the blood and otherwise undermined the system, its treatment should consist in removing the cause, and restoring strength by tonics, good nourishing food, and country air.

Since writing the above, I have ascertained that a preparation called ext. flu. Palma-Christi has lately been prescribed internally by several physicians with good result; but being of an insipid and disagreeable taste, and occasionally disturbing the digestive functions, I would prefer the local rather than the internal use.

During the above period the mother may become the subject of the second anomaly, galactorrhœa, or the too free secretion of milk.

Any young and healthy woman, under the most favorable circumstances, may become the subject of what is termed primary galactorrhœa, particularly when the infant is too weak to nurse. This form is considered physiological; still carelessness may produce pathological changes of a rare character, proving injurious to both mother and child.

To prevent primary galactorrhœa from producing any ill effects, three things are necessary to be observed: 1st. The physician should ascertain whether the woman has a well-developed nipple, or whether it has been flattened through tight lacing; 2d. The infant must be healthy, without deformities in the buccal organs, such as hare-lip, imperforated nostril, or tongue-tied; and, 3d. He should ascertain whether the mother intends nursing or not.

If the nipple is naturally short, a daily traction should be made upon it, which may be easily accomplished by pulling it forward with the fingers, and in a short time it will be made sufficiently long for the purpose. If a consequence of pressure, all that is required is to removet he cause; and, if it is intended to nurse, to put the child to the breast four or five hours after confinement. The advantages of early nursing are twofold: 1st. The few particles of formed milk being mixed with the colostrum, it becomes necessary that it be suckled away in order to relieve the infant's bowels from the me-

conium; 2d. The breast being soft and of normal heat, the infant finds no objection or difficulty in seizing the nipple with the gums, and making it its first play toy and the vehicle of its food; while, by waiting until the secretion is established, the enlargement and tension of the gland embedding the nipple within the projecting areola, and leveling it with the gland, grasping it would be very difficult for the child, and suction totally impracticable. Moreover, the milk accumulating within the glands, unless discharged by a spontaneous dribbling, mechanically removed or therapeutically arrested, would cause engorgement and abscess of the breasts. If it so happen that, independent of a strict observance of all rules, the milk continues to accumulate, the glands must be relieved, either by mechanical contrivances or external remedies. If artificial nursing becomes necessary, it may be accomplished either by a stronger or older child, a woman, a pup, or by pumps of various kinds. In the choice of an instrument care should be taken to select one approaching nature. My preference through experience is for the instrument of Mr. Haggerty, which is the best adapted to afford the same relief as that imparted by the mouth of the child. If artificial means fail, it becomes imperative to prevent secretion, and the duty of the physician is to institute a therapeutical *régime* by diuretics, laxatives, iodide of potassium, and such local remedies as camphor, mint, stramonium, belladonna, etc. The remedy adopted by myself is composed of: ℞. Ext. bellad., ʒ iij, gum camph., ʒ ij, ungt. stramoni, ℥ jss, M.; to be spread over the affected breast every four hours, keeping it covered with oiled silk. By so doing I have either modified or totally arrested the secretion in one or both breasts almost at will, thus preventing engorgement and abscesses, as may be seen by the following case:

In 1866, being engaged to attend Mrs. R., aged nineteen, upon examining her breasts before confinement, the left only was shown me, the right concealed through bashfulness. After delivery nursing went on without apparent difficulty until the seventh day, when she was taken with chills, fever, severe

headache, and distressing pains in the right breast. Looking for the cause, I found the periphery of the right thorax, far above the clavicle, greatly swollen, the breast without nipple, and only with a small portion of the areola, both having been destroyed in childhood by a severe burn. The use of the above prescription caused a gradual decrease of the secretion until the tenth day, when it entirely ceased without extending its influence to the right breast, salivary glands, or pupils.

We have besides two other forms of galactorrhœa, normal and abnormal; normal regarding the nutritive quality of the milk, but abnormal in its quantity. As the free secretion may debilitate the mother, it is necessary to correct it, which may be easily done by preventing the stimulation of the glands by too frequent nursing, and by the internal use of the infusion of rhamnus alaternus. The second form, which is called by some writers mammary diabetes, is abnormal in quantity and quality; in quantity for its excessive secretion, and in quality for its deficiency of nutritive particles and abundance of water. As this form affords no nourishment to the child and debilitates the mother, the moment it is discovered means should be taken to remedy it, either by tonics, country air, good nourishing food, and numerous other things. But as this affection is generally associated with the product of some morbid condition of the system, properly speaking, not belonging to the puerperal stage, I will refrain from enlarging upon it.

Galactocele, or the enlargement of one or more of the milk ducts, which is caused by the sudden accumulation of milk, is one of those affections which occasionally follow parturition, and, as it may be mistaken for mastitis, I feel it my duty to say a few words concerning it. Of this affection, as it is described by Scanzoni, we have two forms, incomplete and complete; incomplete when the lactiferous ducts are partially obliterated, and complete when totally so. In the incomplete galactocele, the ducts being partially obliterated, the milk slowly secreting will cause no other discomfort save a temporary dilatation of the canals, enlargement of the same, and a slight pain. In the complete galactocele, the ducts being

totally obliterated, and the secretion wholly obstructed, as Scanzoni observes, its internal pressure will cause the rupture of one or more of the canals, the effusion of the milk into the cellular tissue, and an accumulation of this fluid into smaller or larger cavities, where it will gradually thicken and determine a suppurative inflammation of the neighboring tissues.

The enormous cystic enlargement of the breasts with circumscribed fluctuation, without local heat or pain, redness of the skin, chills, fever, or any inflammation, are the differential symptoms of diagnosis between galactocele and mastitis.

The treatment depends upon emollient poultices, camphor, belladonna, and an early opening of the sac. The above remedies being too slow in their action to prevent the rupture of the ducts, consecutive effusion and suppurative inflammation, I have been in the habit of opening them as early as practicable, and allowing the contents to run out freely; but, with this procedure, I must confess to have been more than once disappointed, in consequence of the difficulty experienced in healing the milk fistula, which has continued to run to the end of lactation, to the great detriment of the mother and child, by the continuous loss of milk. However, observing the necessity of an early opening of the ducto-cystic tumor, instead of incision, I have instituted aspiration, which is less painful and more efficacious. Under this method the risk of the rupture of the walls of the ducts by distention, or the milk fistula, is prevented, and the cause of the obstruction is removed; nursing is not interrupted, and the mother is spared from long suffering. If by a single aspiration the sac is not emptied, a second, third, or even more, are not objectionable, as this process is almost painless, and exempt from risk.

The instrument and *modus operandi* are simply an India-rubber syringe armed with the trocar needle, its plunging at the most prominent point of the cyst where the fluctuation is distinctly felt, and the aspiration of its contents in the usual

way. In a case where I operated last June, the success was flattering, a single syringeful being sufficient to evacuate the sac. On withdrawing the needle, a small particle of colostrum forming a cast, with shreds of coagulated milk, was found inserted in its point, evidently the cause of the obstructed canal, which once removed, the milk resumed its natural flow, and the small opening made by the needle healed in one day by first intention.

Excoriation, fissure, and ulceration of the nipple, are affections to which primiparas are more subject than multiparas. However slight those affections may be, they yet are distressing and painful, and, if neglected, may be followed by very serious consequences. These affections, as a general rule, commence from the first, second, or third week after confinement, rarely beyond that period, and are caused by the frequent suckling and pinching at the nipple with the gums of the child, the infant's saliva, exposure to cold air, which acts like an irritant upon the moistened surface, negligence of cleanliness, and primiparas with delicate skin and short nipple. Their premonitory symptoms are a superficial abrasion of the nipple, with jerking pains while nursing, quite tolerable at the beginning, but ending with a momentary burning sensation. As the excoriation advances, the nipple, becoming slightly swollen, assumes a reddish hue, and, when the child is put to it, the pain is so intense that the mother is thrown into paroxysms of chills, accompanied by nausea and vomiting. The suffering from superficial fissure is the same as excoriation, but as it ulcerates and extends deeper down, affecting the areolar tissue, the pain becomes so intense and constant that the mother will refuse nursing her child, allow the glands to become engorged, and suffer the consequences of an abscess, very likely followed by the total loss or retraction of the nipple. The prophylactic treatment depends mainly upon the rubbing and washing of the nipple for a few weeks before confinement, with a stimulative or astringent lotion, as tincture of myrrh, or cold rose-leaf tea.

The *post-partum* prophylaxis on those with short nipples

and a tendency to soreness, should be, pulling them with the fingers gently and steadily one or two moments before nursing, and after nursing to wrap them in strips of linen wrung out of flaxseed tea. If the nipple becomes sore the child should be prevented from nursing without a shield (and I find Haggerty's nipple shield the best adapted), besides applying, locally, a detergent and mucilaginous lotion composed of equal parts of quince-seed mucilage and compound tincture of benzoine. Should the nipple be deeply ulcerated or fissured after the above application, strips of membranous plaster, perforated in various points to allow the milk to pass, should be laid over. By this method I have succeeded in relieving and hastening the cure in many cases of the most aggravated form, as may be seen by the following:

Mrs. J. M. S., aged twenty-eight, multipara, with breasts and nipples uncommonly large. Her child, eight months old, with four teeth, in a fit of anger while nursing bit the nipple and almost severed it. Obtaining no relief from her own medications, and unable to suffer longer, she called me in attendance. On my first visit I found the nipple deeply ulcerated, the breast largely engorged, very painful, and with the general symptoms of an inflammatory process. To relieve her I applied the above mucilaginous lotion, strips of membranous plaster, and ordered the nursing to be done through Haggerty's nipple shield. In a few days the breasts became empty and the nipple healed.

Negligence to the above affection will be soon followed by engorgement, phlegmon, and abscess of the mammæ, which are divided into mechanical, and passive, active, and inflammatory.

The mechanical and passive engorgement affecting but one mamma does not progress so rapidly, in consequence of the constant dribbling of the affected breast while the healthy one is nursing; but if the nipples of both are deeply fissured, the total inability to nurse, distending both breasts, will cause active engorgement, and assume the aspect of phlegmonous inflammation, which, once established, acts like cause and effect, producing the most distressing affection during lactation.

In addition to the cause producing fissure and ulceration, engorgement may be brought on by the following: irregularity of nursing, nursing more from one breast than the other, sudden discontinuance of the same, occlusion of the lactiferous ducts and nipple by coagulated colostrum or milk distention, rupture of the ducts, and by the flux of blood occasioned by pressure upon the adjacent cellular tissue, by hyperæmia and exudation, exposure, moral affections, dragging down of the breasts, dietetic imprudence, and very often by a natural predisposition.

The moment any of the symptoms of these affections are ascertained, means must be taken to prevent their continuation, either mechanically, as by Haggerty's instrument or nipple shield, as above shown, or therapeutically, externally, or internally. The external remedies most used are equal parts of olive oil and ether, camphorated oil with oil of mint, belladonna ointment, emollient poultices of flaxseed meal, althea and lettuce leaves. A remedy from which I have obtained valuable relief for many years, as I will directly show, is the equal parts of fluid extract of belladonna and crocus sativus, gently rubbed upon the breast three times a day. Care should be taken, though, to wash the nipple before nursing. Mrs. H., multipara, with good breasts and nipple, being carelessly habituated to nurse from the left more than the right breast, the latter becoming painful and swollen by the accumulated milk, threatened inflammation, from which she was soon relieved by regularity of nursing, and the external application of the above remedy. The internal remedies are limited to salines, laxatives, diuretics, diaphoretics, and iodide of potassium. The infusion of rhamnus alaternus, which is highly recommended by Dr. Orioli, much used among Italian women, and of which I have had long experience, arrested the inflammatory engorgement of the breasts of Mrs. A., aged twenty-one, primipara, who had neglected nursing for two days, in consequence of extreme pain produced by fissures.

Returning to the last of the causes producing engorge-

ment, namely, a natural predisposition to mammary abscess, I may say that this notion is refuted by all and tolerated only by few. In their opinion its regular recurrence is based upon the susceptibility of the mammary glands to swelling and inflammation during lactation by the least irritative cause, and by a lymphatic temperament with fretful and nervous predisposition.

During my practice, having observed these abscesses in perfectly healthy women, with calm and easy dispositions, surrounded by all the comforts of life, I am inclined to differ with them, and establish as a cause the occlusion of a milk duct by coagulated colostrum or milk, which, after the first occurrence, unless removed, at a subsequent nursing may produce the same effect as before. The two following cases, one *a priori*, and the other *a posteriori*, may corroborate my statement.

In the *a priori* case, the subject was a Mrs. S. T., aged twenty-three, primipara, who on May 27th gave birth to a female child. A few hours after confinement she put her child to the breast, and continued nursing her as often and as regularly as she could naturally do. The milk went on flowing freely until the eighth day, when she called my attention to a kind of unpleasant sensation in the right breast. On examining it, I found a small ridge about two inches long, of the size of a large pencil, situated outwardly and in its middle part with a slight sense of pain when the child was nursing. After thorough inspection, I ascertained that I was dealing with an incomplete galactocele, as before described. I prepared myself for the emergency, and ordered camphorated oil to be rubbed on the affected breast, in order to scatter the accumulated milk and diminish secretion. My efforts were to no purpose, as the enlargement increased, until it was the size of a large lemon. Although there were no inflammatory symptoms nor distressing pains, having defined a distinct fluctuation, fearing rupture of the canal and its consequences if left alone for a while longer, I determined to evacuate it, and accordingly on the third day I aspirated it with a common India-

rubber syringe. After drawing four ounces of milk, the sac having totally collapsed, and no more fluid coming, I withdrew the needle, and to my delight, as I had predicted, I found inserted in its point a small colostrum cast with shreds of coagulated milk; the opening was closed with adhesive plaster, healed by first intention, and nursing continued without interruption.

The *a posteriori* case was that of Mrs. M., who, at each of her previous confinements, had abscess of the right breast. Attributing the occurrence to faulty care on the part of the accoucheur, in her coming third confinement she determined to make a change, and accordingly, when about the seventh month of utero gestation, engaged, and apprised me of the facts. To ascertain the cause, I examined the nipple and breast, and found both well developed and without deformity, except a small tumor, about the size of a common pea, situated in the internal contour of the right breast, about two inches from the nipple, from which she recollected her first trouble commenced. As she was anxious to have something done, I instituted a prophylactic treatment by keeping the breasts loose and painting the tumor three times daily with a weak solution of tincture of iodine and fluid extract of belladonna. In due time she gave birth to a healthy boy, who was put to the breast a few hours after confinement. Mother and child did uninterruptedly well, until the ninth day, when she felt a dragging sensation at the breast, with its gradual filling up, which continued until the fifteenth day, when it was lanced, and about two teacupfuls of fluid, more of milk than matter, came out. The progress of this engorgement was so astonishingly rapid that the antilacteal remedies had no effect whatever, leaving no alternative but the poultice to help suppuration, and lancing in due time. Nursing from this breast was necessarily abandoned, healing progressed slowly, and the old tumor remained when the opening was closed.

Of course I lost her patronage and that of her family, but afterward learned that on her fourth confinement she had the dreaded abscess again in the same breast, and meeting her

husband a few days since, he informed me of the same occurrence having taken place in subsequent confinements. I am therefore forced to think that the removal of the cast by aspiration in the former case, the succeeding free flow of milk the sudden relief, the instant cure, and the interrupted nursing—all bring me to the conclusion that the cast obstructing the lactiferous duct was the active cause of the galactocele, and its accidental removal the permanent cure; while, in the second case, the unexpected abscess at the first lactation, the existence of the small tumor after healing, the regular reoccurrence of abscesses from the same breast and locality, and always with the same symptoms, suggest to me that a cast having occluded the lactiferous ducts produced galactocele, engorgement, and abscess; otherwise, the inflammation of the first abscess affecting the internal tunic of the lactiferous ducts caused a permanent occlusion of the same, and naturally a regularly recurring galactocele, and its consequence at every subsequent confinement.

Of all the above-mentioned mammary affections, mastitis is the most distressing and most difficult to relieve. This affection originates either from the subcutaneous cellular tissue, from the whole gland, or from the cellular tissue between the pectoral muscle and the body of the gland. The first two of these affections are observed only at the epoch of the functional activity of the glands, and are produced by all the causes mentioned in the glandular engorgement. The third, originating from a membrane under the gland, may occur at any time during lactation, and may be caused by dietetic imprudence, cold, scrofula, arthritis, and traumatically.

The symptoms accompanying the former are ushered in by chills, fever, and lancinating pain, in one part or all over the breast, and are felt more keenly when the child is put to it, or when under pressure. At the seat of this pain is found a limited engorgement which gradually increases over the whole mass, and shortly after a sort of doughy feeling is observed on palpation, indicating the subjacent pus ready to be let out by incision. The pain of the third form is felt from

the beginning quite deeply, and, in addition to the above symptoms, is accompanied by swelling of the axillary glands, great thirst, scanty urine, constipated bowels, total loss of appetite, insomnia, and occasional cerebral phenomena. Moreover, a hard knot or nucleus, from which this affection originates, is found deeply under the gland, easily recognizable in the beginning when the breast is not engorged by its nodulated surface. As this affection progresses, the nucleus or nuclei increase in number, the pain is felt sharper and more general, and the breast which was not hard in the beginning becomes very much so as the disease advances, the whole train of symptoms become very much aggravated by the total cessation of secretion, and the formation of pus either in one grand sac, or in various points constituting one or more abscesses.

As regards prognosis, mastitis is never attended by death except in very rare cases, when the system has been very much undermined, or by pyæmia; but it is always attended with severe pain, and if the abscess has affected several milk-ducts, each one forming a separate fistulous sinus, healing is more obstinate and suffering more protracted.

The treatment of the first two forms of these affections is the same as in engorgement. In the last form, as nursing, rubbing, and other manual interferences, are attended by distress, and often aggravate the case, care should be taken in their use. Laxatives, diaphoretics, and acids, are the best internal remedies. If the local affection is accompanied by general inflammatory symptoms, bleeding or leeching is at once to be resorted to. Evaporation with aqueous extract of opium, fluid extracts of belladonna and crocus sativus, poultices of hyoscyamus, lettuce, althea leaves, and flaxseed meal, are the best topical applications to facilitate suppuration and allay pain. The moment fluctuation is ascertained, an early opening is highly recommended; owing to the depth of the affection, though, fluctuation is seldom felt before the lapse of fifteen days or more, and even then it cannot be detected with decided precision; but it can be suspected from the enormous size and smooth-

ness of the breasts, the bluish hue of the skin, and the œdema of the surrounding tissues. If with such evidence the real presence of pus is not detected, plunging the knife deeply into it will soon reveal its existence and justify the procedure. If there are more than one abscess, each should be opened, allowing the matter to discharge by keeping the sac collapsed, by pressure, with strips of adhesive plaster. With the opening of the abscess, if the collection of pus is in one large sac, the difficulty generally is ended by its evacuation; but if in more than one, and the destruction made upon the neighboring tissues and lactiferous ducts, or the hypertrophy and induration of the gland too great, healing will be attended with more difficulty in consequence of an endless number of fistulous sinuses which by their burrowing tendency are very obstinate to heal, and when cure has taken place the breast is left quite hypertrophied with retracted nipple, and the constitution of the patient greatly undermined. To help the absorption of the indurated tissue, it is necessary first to invigorate the mother by tonics and animal diet, and the use of gradual compression by corseting, and prepared sponges. This affection seldom occurring, its consequences are not fully appreciated, and in order to give you a slight sketch I take the liberty of intruding upon your already overtasked patience a report of a case which was rather singular in the manner of its occurrence:

Mrs. M. M., aged thirty, primipara, of lymphatic temperament, on May 5, 1866, fifteen days after confinement, while enjoying the courtesies of friends, had a fit of laughter, and at once felt a slight chilly sensation, followed by a severe pain in the right breast, which increased by nursing. The following morning, on being sent for, I found her suffering with shooting pains deep in the breast, dry and hot skin, with pulse 120, and tongue furred and dry. Examining the breast, I found a hard nodule the size of a bird's egg deeply embedded in the centre of the gland and very sensitive; being the first case of the kind I had ever seen (and fortunately the last), I doubted its nature; as there was no defect in the nipple, nor accumulation

of milk in the glands, my attention was directed to the local pain and general symptoms. Accordingly, I prescribed saline draughts and leeches; none of these producing any relief, anodyne poultices were applied to allay pain and facilitate suppuration. After eighteen days of constant excruciating pain, finding a spot indicating fluctuation, I opened it, and a considerable amount of greenish pus was discharged. With the opening of it I thought the difficulty was controlled, but was disappointed by the appearance a few days after of numerous little openings, riddling the breast like a sponge, which discharged milk and matter for forty days, resisting all sorts of medications, yielding only to constant graduated pressure by corsets, leaving the nipple retracted and the breast quite disfigured.

The last two of the before-named affections are pain in the breast and painful nursing. The first, being caused by keeping the child too long from nursing, is temporary and not alarming, save for a certain degree of discomfort, fullness, and slight pain at times when the milk is forced out in jets, or drops by involuntary or spasmodical contraction; and if during this temporary spasm the child is put to the breast the sense of discomfort is aggravated and changes to pain, particularly in the opposite breast. To prevent its recurrence, nothing but careful attention to regular nursing is necessary.

Painful nursing is an affection to which some women are subject, especially those of weak and nervous constitutions; and, as it often originates in nervous debility, a tonic treatment, associated with anodynes, generous diet, and country air, will be sufficient to insure relief. Obstinate cases resisting the above treatment will yield only to the weaning of the child.

If by the above remarks I have not succeeded in conveying an exact idea of the title of this paper, I beg to be excused, for, *Quid potui facere fœci faciant meliora potentes.*