

to any one. I do not imagine that what I have said will have any weight in the solution of those questions. The questions at issue are not to be decided by authority, but by observation. The conviction that is determined by authority is easily acquired, but it is mere prejudice. The conviction that is determined by observation is of slow growth, the fruit of personal labour, but it is the only conviction that thinking men can value. This everyone must acquire for himself.

Devonshire-square, June, 1856.

THE PHYSIOLOGICAL TEST FOR STRYCHNIA.

By MARSHALL HALL, M.D., F.R.S., &c.

SOME years ago several cases of poisoning by arsenic occurred in rapid succession. The career of crime was stayed by its being made publicly known that no poison was so readily or certainly detectible as arsenic.

Arsenic is scarcely more detectible by chemical re-agents than strychnia has proved to be by the physiological test which I recently published in the pages of THE LANCET.

Recently the 5000th part of a grain has been made manifest to a multitude of beholders at once, and so manifest that no visual object can be more conspicuous—an event very different from the fact of a mere change of colour.

The effect is produced, too, by the simplest means, such as our medical brethren in the country always have at hand.

The common *frog*, properly prepared, is not less susceptible of the convulsive effects of galvanism than it is of the peculiar effects of strychnia. Of frogs the smaller ones are more susceptible than the larger, and these should be used recently taken from the pond—from the *mud* if possible.

The skin should be well dried by means of blotting-paper. The strychnia to be tested should be dissolved in as small a quantity of water as possible, and dropped on the back of the frog, so that it may become absorbed.

Probably a still less quantity of this extraordinary agent may be made manifest if inserted under the skin, or injected into the stomach.

In a short time the frog becomes affected with tetanoid or epileptoid spasm or convulsion on the application of the slightest cause of excitation. It is *strychnoscopic*.

This susceptible creature may, I am persuaded, be made available for the detection of several other poisons, with each of which the kind and form of the phenomena vary.

Strychnia in the vegetable kingdom answers to the *diastaltic spinal system* in the animal kingdom, on the *centre* of which its energies are impressed—a system, the extent of which in the animal economy—next to that of the *blood* itself—is not even now, after the lapse of nearly a quarter of a century, by any means known or appreciated by the profession!

In this system there is a kind of "*solidarité*," by which every part is affectible by the excitation of every other:—in reality, the *spinal centre* is what the *great sympathetic* was formerly supposed to be!—but there is a *speciality* too, by means of which one organ may be affected more or less than the rest, thus leading to the difference of form of the phenomena produced, to which I have adverted. The motor branch of the fifth pair is most affected in traumatic tetanus, the laryngeals in strychnism.

I am preparing an essay on the important subject of strychnia as a remedy, a poison, and as a physiological agent.

Princes-street, Hanover-square, June, 1856.

ON SPARGANOSIS, OR MILK ABSCESS.

By JAMES GILMOUR, M.D., L.R.C.P.

SINCE MM. Trousseau and Contour published a memoir, about fifteen years ago, on the Treatment of Mammary Abscess by Compression, very little has been added by subsequent writers on the abortive, discutient, or repellent method of treating this annoying and perplexing affection.

The management of milk engorgement has been nearly always slighted by the accoucheur as *infra dig.*, and left generally to the care of the nurse, and of course she does her best to assist, by fomentations and cataplasms, the process of suppuration,

fancying that when this has been accomplished all trouble and pain will have ended. Alas! this is not always the happy termination.

It is not my intention, in this paper, to give a sketch of the premonitory symptoms which usher in inflammation of the mamma; they are already well described, and as well known; neither do I wish to enter into any useless disquisition with regard to the seat of incipient abscess—viz., whether the congestion, engorgement, or inflammation is located in the proper gland structure, or in the surrounding areolar tissue, fascia, or dermis texture; or whether they be, each or all, involved in the disease. Neither do I inquire if the excitement be limited to one or more of the superficial glands, or may extend to those deeper seated, because I should be uselessly repeating that which is remarkably well described by Burns and others; the *rationale* of treatment about to be described will effect a cure in whatever part of the organ the seat of the disease may be located.

Our great object in threatened milk abscess is to discuss the tumour, and thus prevent suppuration; and our curative indications are, as well expressed by Abernethy, "to remove or mitigate the cause, and to diminish the excited actions by means operating on the system at large, or on the part immediately affected" (Works, vol. iii. p. 31). It was formerly supposed that the abortive treatment of this affection led eventually to the formation and growth of scirrhus and malignant tumours. *Ætius* tells us, in his remarks on emollient remedies, that "violent discutients, which evacuate without softening, do indeed lessen the swelling, but leave afterwards an *incurable* evil." Benjamin Bell says that in his day the doctrine was pronounced erroneous; and John Hunter set the dispute at rest when he asserted—"I see no reason why inflammation should not as well subside by resolution as by suppuration" ("On the Blood, p. 421.") I am not aware that any author has revived the idea since Hunter's time.

The resolvent method of treating milk abscess by outward applications is of very ancient origin. Paulus *Ægineta* "squeezed a soft sponge out of tepid oxycrate, applied to the breasts, and bound it on in a proper form" (Syd. Soc. Ed., vol. i., p. 504). Moschion (who is supposed to have practised at Rome in the days of Nero) advocates the external use of vinegar-and-water; and Van Swieten, reasoning in favour of Moschion's views, remarks, "For whilst they are quickly applied at the beginning of inflammation, there is great hope of gently dissipating the inflammation" ("Commentaries," vol. xiv. sect. 1336). And it may not be out of place here to state that Dewees, in his "Diseases of Females," gives an excellent chapter on the resolvent treatment of milk abscess by externally applying warm vinegar-and-water, but he omits to give either Moschion or Van Swieten any credit for being the originators of the remedy. He evidently gleaned his information from the above source. The reader, curious in these matters, will find a most interesting account how the ancients treated inflammatory tumours by *discussives*, in Friend's "History of Physic," vol. i., pp. 53—70.

Nearly all modern writers recommend (in the inflamed condition of the mamma) venesection, leeches to the part, fomentations and poultices, suction pipes and tubes of all sorts; but, what is more remarkable, they *all* exhibit (with other remedies) saline aperients. Now these, in my opinion, are given most judiciously; and in the method of treatment advocated by me here, they ought not to be omitted. The following summary of discutient remedies, from Samuel Cooper, may not be uninteresting: "Topical blood-letting; saline purges; low diet; keeping the inflamed breast from hanging down; gentle friction with a soft sponge wet with warm emollient liquor; having the milk tenderly sucked out at proper intervals; saturnine applications; lotions containing muriate of ammonia."

I beg to reintroduce to the notice of the medical profession the treatment of milk abscess by *compression*, as advocated by Trousseau and Contour; the compression being made with very long strips of adhesive plaster. I give their own words: "The compression is to be accomplished by strips of plaster, broad, and sufficiently long to go several times round the body. The surgeon, standing by the side of the patient, must first fix one of the extremities of the slip at about the middle of the back; then carry it towards the side of the chest; then pass it over the breast, beginning from the lowest part; then obliquely from below upwards to the outer third of the clavicle on the healthy side; and then obliquely downwards across the back, so as to cover the extremity of the slip already fixed. Following this course several times, he must take care that the portion of the band applied each time covers the two upper thirds of the preceding turn. But it is easy to see that if the bandage

is always carried in the same direction, the breast cannot be completely covered; and that, on the other hand, as its several turns go across the clavicle of the healthy side, the movements of the shoulders would tend to displace it, and the lower part of the breast might soon be uncovered. Other strips of plaster are therefore applied, which, proceeding from the anterior and upper part of the abdomen, ascend, crossing the first obliquely; then pass under the axilla, and return, after passing over the posterior part of the chest, to the part where they were first applied, and then are carried again along the same track, covering each time the two upper thirds of the strip last applied. The breast is thus completely covered by the bandage, which is prevented from rising by this last described, which ought to cover only the upper part of the breast." (*Medical Gazette*, 1841, p. 959.)

And what advantages did the authors attribute to this plan? They found that it immediately relieved pain, and diminished the inflammatory engorgement. When applied, after the abscess was opened, it favoured the evacuation of matter, and shortened the suppurative period. I have considerably modified Trousseau's method in my practice: I use bands of plaster about fourteen inches long and one inch broad; occasionally they may be required rather longer. The extremities of the strips are attached to the ribs behind, pass over the tumefied mamma, and fastened on or about the sternum; whilst a second set pass from the anterior part of the abdomen to the clavicle, covering the first layer, and *vice versa*. I am satisfied this answers as well as the longer bands, the amount of compression is nearly as great, and the benefits very satisfactory, as will be seen by the recital of only three cases selected from a large number.

CASE 1.—Mrs. H—, aged twenty-seven, confined May 4th, 1854, of her first child; breech presented; still-born. Forty-eight hours afterwards, and when the breasts were tumefied and painful, the adhesive strapping was applied, as above described, *the nipple being entirely covered*. Saline aperients were freely administered. On the second day after compression, the breasts felt full, and attended with considerable pain. She says that the strapping slightly interferes with her breathing, but objects to have it taken off. Next day feels more comfortable; the swelling and tension gradually sub-sided until the plaster became loose, when it was removed. She was quite well in ten days.

CASE 2.—Mrs. E—, aged twenty-nine, confined June 4th, 1855, of her second child, which was very delicate and strumous. She had witnessed the good effect of the strapping in case 1; she also told me that at her first confinement both the breasts suppurated, and did not heal until after two months of great suffering. Two days after delivery I applied the strapping, *but the nipples were not covered*. The lacteal secretion was not entirely suppressed; the baby sucked at regular intervals; and when I considered the breasts sufficiently prepared for a larger flow of milk to enter, I removed the plaster, and she also was well in ten days. However, three weeks afterwards, from exposure to cold, the left mamma became swollen and painful; a hard tumour formed in the superior part of the organ, next the clavicle. The compression was again applied for four days, and removed; the swelling had disappeared. Saline purgatives were taken during both periods of compression. Since that time she has had no return of any inflammatory engorgement.

CASE 3.—Mrs. S—, aged twenty-four, delivered on Dec. 2nd, 1855, of a strong, healthy infant, a *primipara*. On the third day afterwards, when the breasts were very full and painful, owing to the baby refusing the nipple, which was small and flattened, the strapping was applied in the usual manner, *leaving the nipples uncovered*. The lacteal secretion was abundant, and ran from the nipples. She says she has had no pain since the compression was commenced. One week afterwards she removed the strapping, owing to its getting loose, and she continued quite well. Aperients were given as usual.

In cases where the plaster was applied too late to prevent suppuration. I was astonished at the relief afforded from pain, tension, and throbbing, though the abscess gradually proceeds to complete maturation. After suppuration has taken place, and the abscess having naturally burst before the surgeon had been called in, the greatest benefit will be found from the application of this mode of compression; and amongst the many advantages arising from the strapping, not the least important is the prevention of the pyogenic action from extending through the lax tissue of the organ.

Again, when suppuration has gone on unchecked, and after one or more sinuses have formed, marked benefit will be de-

rived from this mode of compression. In such cases, great attention and perseverance are requisite, because the plaster will have to be repeatedly changed, for it becomes loose, as the chronic engorgement and tissue infiltration disappear. I prefer the preliminary trial of this method in sinuous abscess to others recommended—to laying open the sinuses, as first practised by Hey, and still followed by others; or to the injection of the sinuses with iodine, as pursued by Mr. Birkett at Guy's Hospital. At the same time that local strapping is employed in these cases, we must resort to constitutional treatment by tonics and alteratives, for the system is generally weakened and debilitated, owing to the continual drain kept up from the sinuses. Hectic may exist; many women are greatly emaciated, so much so that Ramsbotham states that "the body has been known to dwindle almost to a shadow." I have a patient under my care at present, aged twenty-three, with sinuses in one breast, of six weeks' duration, who presents all the appearances of a person far advanced in phthisis. If the compression be employed in these cases without a generous diet, fresh air, and tonic medicines, we shall assuredly fail in causing the sinuses to heal up; but when all are conjoined, the improvement of the patient is gradually manifested.

And now a word or two with regard to our duty as accoucheurs. In every case of delivery, but more especially in a primary one, it is of great importance to the patient that we should make a careful inspection of the breast either before or immediately after delivery. If we find a flat, sunken, or otherwise ill-formed nipple, our attention should be constantly directed to avert the troubles likely to arise from such a condition. We should carefully watch the progress of the lacteal secretion, so that danger does not come upon us unawares, nor find us unprepared. This careful guarding and watchfulness with regard to the first flow of milk has been an object of remark by many of our older writers, but especially by Van Swieten, who gives us excellent advice in the fourteenth volume of his "Commentaries." The subject has not been sufficiently urged on our attention by modern writers; but knowing, as we do, from experience, the sad havoc made on the constitution by suppurating sinuses and cavities, any method of management which has for its object the prevention of milk abscess must be of paramount importance to both patient and surgeon. Benjamin Bell sounded this note of warning nearly one hundred years ago:—

"From the great distress which always attends suppuration in the mamma—indeed, the pain and misery of the patient is, in such cases, often so great, that no doubt can remain with unprejudiced practitioners of the propriety of endeavouring, *in every case*, to prevent it."—"Surgery," vol. i. p. 145.)

Trousseau did nothing more than revive an old remedy, long fallen into disuse; and I only wish to re-introduce a modification of Trousseau's method, because I think that the profession has not taken sufficient interest in his memoir. The earliest author that I am aware of who has treated of the method of compression is Heister. After giving a lengthened description of milk abscess, and its treatment by the discutient method, we find him making this assertion:—

"The strongest discutient, that I have frequently found to excel others, for these tumours, is the empl. ex sperm. ceti preparat."—"Surgery," vol. i. book iv. chap. iv.

Pearson alludes also to it in his "Principles of Surgery," chap. iii. Of midwifery authorities may be mentioned Smellie and Cooper, who recommend the "empl. de minio vel diapulma."

Sufficient has been said in this short paper to urge on the profession a more extensive trial of the *methodus medendi* here advocated. Milk abscess is at all times a troublesome affection; at the time when joy is at its highest note, misery and pain are not lagging far behind; and though I do not go the length of believing, with Hippocrates, "*mulieribus quibuscunque ad mammas sanguis colligitur, insaniam significat*," (*Opera*, venet. 1588, tom. i. lib. v. aphorism 40,) yet I have occasionally witnessed much disturbance of the *encephalon*, in conjunction with other symptoms.

Park-road, Liverpool, 1856.

ON A

CASE OF HERMAPHRODITISM.

By WILLIAM LONEY, Esq., Macclesfield.

JANE W—, aged twenty-eight years, was a short time ago admitted into the lunatic ward of the Macclesfield Workhouse. Her unwillingness to be washed was so great, that the suspicions of the nurse were excited. She told me she was