the pores in any one. McKenna ridicules the cleansing properties of cold cream, which are so often advertised. But if any observer will apply cold cream to the face and then rub it off with cotton-wool he will find that the cream has removed a considerable layer of dirt and dust—more, in fact, than can be removed with a damp sponge or towel. McKenna further dismisses the use of creams and skin foods on the ground that, with the exception of glycerin, none of the usual constituents are absorbed. But Sutton's experiments have shown that fats *are* absorbed, though in very varying degrees. McKenna would apparently confine the toilet of the face to the use of soap-and-water. He says that it is only in exceptional cases that the skin of the face is irritated by toilet soaps, if we exclude the cheaper soaps containing coco-nut oil and an excess of free alkali. This is by no means a universal experience. McCafferty and Genovese, in addition to their tests with cold cream, made further tests with soap. They chose patients with moderately dry skins, and observed the effect of a few weeks' use of soap-and-water on the face. They found that mild desquamation appeared, with a feeling of tautness. This disappeared with the application of cold cream. They conclude very reasonably that soap-and-water are suitable for oily skins, and cold cream for dry skins. Vanishing creams they condemned as of no value, on the ground that these creams were only used as a basis for powder, and the same purpose could be served equally well by cold cream. From an aesthetic point of view this is not quite true. The fatty nature of cold creams makes them too shiny for use by day, and it is for this reason that women dislike them.

An Experiment with Vanishing Cream

There is, however, a popular feeling that vanishing creams are "drying." On theoretical grounds it would seem possible that their high glycerin content might prove irritating. As I could find no statements on the subject I tested them myself. Trials were made with forty individuals, mostly girl undergraduates and a few older women. Pond's vanishing cream was rubbed into the right side of the face at night and rubbed off in the morning. The other side of the face was left untreated, and used as a control. The duration of the tests was from four to six weeks in April and early May, a period in which many women notice a temporary roughness of the face, generally attributed to spring winds. The results were as follows:

In twelve cases the untreated side of the face became rough, while the treated side remained smooth.

In one case both sides desquamated, but the untreated side was the rougher.

In one case both sides desquamated equally, which was rapidly cured by cold cream.

In one case only the treated side desquamated.

In one case small pustules appeared on the treated side.

In twenty-four cases there was no change.

In fact, in twenty-four cases vanishing cream proved harmless, though three of these cases had naturally dry skins. In thirteen cases the cream was beneficial. In only one out of forty cases did the cream cause dryness.

The use of cosmetics is looked upon more kindly on the Continent than in Great Britain. In contradistinction to such criticisms as those of McKenna, we have the opinion of Kromayer that "salves and pastes and the like cause no change in the skin that can produce a bad cosmetic effect." Sabouraud goes further, and says that he would almost prefer bad creams and bad cosmetics to none at all. He has noted, as have many others, that actresses as a class look younger than their contemporary sisters. One sometimes hears the complaint that it is "unnatural" to put creams and lotions on the skin, but it is equally "unnatural" to wash off the natural oils with soap-and-water. We live in dry, warmed houses, and expose the skin to sharp alternations of heat and cold. Is it not to be expected that it should need protection and re-oiling?

BIBLIOGRAPHY

- Audry and Valdiguie: *Bull. Soc. Franç. de Derm. et Syph.*, 1928, xxxv, 623.
 Barron and Habein: *Amer. Journ. Med. Sci.*, 1921, clxii, 833.
 Berger, E.: Hair Dye containing Aniline, *Arch. of Ophth.*, 1909, xxxviii.
British Medical Journal, 1922, i, 373.
 Bunch, W.: Dermatitis due to Hair Dyes, *Trans. London Derm. Soc.*, 1916.
 Close, W. J.: *Med. Journ. of Australia*, January, 1932.
 Cole, H. N.: *Journ. Amer. Med. Assoc.*, 1924, lxii, 1909.
 Idem: *Ibid.*, 1927, lxxxviii, 397.
 Goeckermann, W. H.: *Ibid.*, 1922, lxxix, 605.
 Gumpert: *Zeit. f. Gesundheitsverwalt. und Gesundheitsförs.*, October, 1930.
 Knowles, F. C.: *Pennsylvania Med. Journ.*, September, 1916.
 Kromayer, E.: *The Cosmetic Treatment of Skin Complaints*, 1930.
Lancet, 1926, i, 1058.
 Mayer, R. L.: *Med. Klin.*, October 31st, 1930.
 McCafferty and Genovese: *New York State Journ. Med.*, 1928, xxviii, 303.
 McKenna, R. M.: *British Medical Journal*, 1930, i.
 Miller, H. E., and Taussig, L. R.: *Journ. Amer. Med. Assoc.*, 1925, lxxxiv, 1999.
 O'Donovan, W. J.: *The Hair*, 1930.
 Oliver, T.: *Lancet*, 1922, ii, 907.
 Olson, G. M.: *Journ. Amer. Med. Assoc.*, July, 1917.
 Saalfeld, U.: *Urol. and Cut. Rev.*, June, 1932.
 Smith, W. G.: *Dublin Journ. Med. Sci.*, 1919, cxlvii, 147.
 Sutton: *Diseases of the Skin*, eighth edition, 1931.
 Tarber, E. B.: *Dermatology in its Relation to Cosmetics*, *Trans. Sect. Derm. and Syph., American Medical Association*, 1927, p. 81.
 Tobias, N.: *Journ. of the Missouri State Med. Assoc.*, February, 1932.
 Trutwin: *Med. Welt*, August, 1930.
 Wilbert, M. I.: *Public Health Reports, Washington*, 1915, xxx, 3059.
 Woltman, H. W.: *Journ. Amer. Med. Assoc.*, 1922, lxxix, 1685.

THE TREATMENT OF ABSCESS OF THE BREAST*

BY

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Although great strides have been made in preventing infection of the lactating breast, mammary abscess is still an everyday occurrence. For many years teaching concerning the treatment of these abscesses has remained stereotyped. Under the well-known principle of awaiting for fluctuation, or at any rate until localization has occurred, and then obtaining free drainage by incisions radiating from the nipple, results in the majority of cases are good. The objections which can be raised to this well-tried method are mainly these: (1) the resulting scars are too often unsightly; (2) a proportion of cases continue to discharge for weeks or months; (3) the dressings, if secondary infection is to be minimized, require the frequent attention of a skilled nurse. About two decades ago an innovation was introduced. Briefly it consisted of an early but small incision followed by suction with a Bier's hyperaemic bell. I saw something of this method and the pain which it caused, and the results which ensued, were such that I gladly returned to the methods of our forefathers. The method of treatment which presently will be described is free from all the objections of its forerunners.

Most abscesses of the breast are of the intramammary variety (as opposed to subcutaneous or retromammary), and it is lactating women who are usually sufferers. Infection occurs in one of two ways: (1) Staphylococci enter the lactiferous ducts and cause clotting of the milk. Within the clot these organisms multiply, and the acini severed by the obstructed duct become the seat of a lively inflammation. (2) Streptococci enter through a crack or abrasion of the nipple, and inflammation proceeds apace in the interglandular tissues. Unless it is arrested the infection spreads to the glandular mechanism. Even

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upon the closest examination it is rare to find any evidence of a cracked nipple. Clinical and bacteriological investigation leaves little doubt that (1), above, is by far the commonest cause of an abscess of the breast.

THE "CLOSED" METHOD OF TREATMENT

As heretofore, surgical judgement must be exercised as to the time at which the abscess is to be opened; it is seldom wise to consider incising the breast until localization of the inflammation has occurred. Usually, it is best to wait for fluctuation, but occasionally, when the abscess is deep-seated, this all-important sign cannot be elicited with certainty. In order to define the limits of the abscess it is sometimes an advantage to have the affected breast emptied by a breast pump. As this is a painful process it can be deferred until the patient is under the anaesthetic.

The Operation.—Under gas anaesthesia a single incision three-quarters of an inch in length is made at the most dependent portion of the indurated area. Where feasible, the incision is made in the "hidden" areas of the breast—namely, the areolar, the submammary groove, or towards the axilla. The finger is inserted and loculi of the abscess cavity are broken down. A half-inch drainage tube is introduced into the cavity. The edges of the wound are approximated snugly around the tube by a single silk-worm-gut stitch, which passes also through the side of the tube, anchoring it into position. The tube is cut off nearly flush with the skin. Into the large tube is passed a small quarter-inch drainage tube with a number of perforations near its distal end. The small tube is then fastened to the large one by a fine silkworm-gut stitch (Fig. 1.) A sterile gauze square, anointed liberally upon

FIG. 1.—Diagram depicting the technique described in the text. The amount of Dakin's solution to fill the abscess cavity has been ascertained at the time of the operation. This quantity is injected down the small tube every four hours. The overflow runs out of the large tube and is absorbed by the gauze. The layer of vaselined gauze protects the skin from the irritating effect of the fluid.

one aspect with sterile vaseline spread with a spatula, is laid upon the breast, and the tubes are brought through a small hole cut in the centre of the gauze. The gauze is fixed to the large tube by yet another silkworm-gut

stitch, which also serves to close the hole snugly in the gauze about the tube. The patient is now allowed to come out of the anaesthetic.

Dressings.—A liberal amount of fluffed-up gauze is arranged over the vaseline-gauze-protected breast. This in turn is covered by a large piece of oiled silk. Through these layers is brought the *small* tube. The whole is supported by a many-tailed bandage, which encircles the upper abdomen, both breasts, and the opposite shoulder (Fig. 2). The reader may be thinking that this is compli-

FIG. 2.—Method of applying the overall many-tailed bandage, and of fixing the end of the irrigating tube when not in use. In practice the free end of the tube is wrapped up in a piece of gauze moist with Dakin's solution.

cated and unnecessary, but the whole procedure is carried out in a very few minutes if the simple requisites are got ready beforehand. The boon of this method becomes apparent in the supreme simplicity of the after-treatment.

After-treatment.—The patient lies in bed in a comfortable semi-recumbent position. Every four hours the measured quantity of Dakin's solution is injected down the tube (Fig. 1). The overflow is automatically absorbed into the fluffed gauze. If necessary, this instillation can be done by an unskilled nurse, or even by the patient herself. The dressing is not disturbed for twenty-four hours. At the end of that time the many-tailed bandage is loosened and the fluffed gauze is changed. Providing the temperature chart is satisfactory, and the patient does not complain of discomfort (in my experience she has always been extremely comfortable), the inner dressing of vaseline gauze and the tubes are not touched. This labour-saving, pain-sparing regime is followed until the fourth or fifth day, when the surgeon himself removes all the dressings and usually takes out the tubes.

More Remote After-treatment.—A fresh piece of vaseline gauze, which is so essential in preventing cutaneous erosion by the Dakin's solution, is applied. By means of a rubber catheter the abscess cavity is washed out with the solution twice a day. It will not be long before irrigation need be undertaken but once a day. By approximately the tenth day the wound presents a healthy, granulating appearance, but there appears from time to time some sero-purulent discharge, probably admixed with a little leakage of secreted milk. The latter is washed away with Dakin's solution diluted with saline to half or quarter strength. The time has now arrived for the vaseline gauze square to be discarded. It is usually advisable to keep a wisp of vaseline-impregnated gauze in the mouth of the wound for a day or two.

Convalescence.—The only dressing now required is a piece of dry folded gauze over the wound, kept in place by adhesive plaster. The patient can get up, wearing an ordinary brassière for support. There is always a considerable indurated area in the breast at this period, and it persists for some time. Latterly I have placed the patient, during convalescence, upon iodine-in-milk therapy, similar to that described by Mr. H. Chitty for the treatment of actinomycosis. This has been followed by a more rapid absorption of the massive induration and an obvious improvement in the patient's general condition.

CONCLUSION

I submit that this technique, which largely follows that of Dr. J. E. Hobbs of St. Louis, is an advance on older methods. After a considerable experience of it I am confident that those who adopt the method will find that the patient is delighted with the painlessness of the post-operative period. Scarring of the breast is reduced to a minimum—obviously an important consideration. Convalescence is short—much shorter than when the classical treatment is employed. I have found that the after-treatment has received the unqualified approval of the attending nursing staff, and it seems probable that the method will appeal particularly to the more isolated practitioner, who, of necessity, must leave the after-treatment largely in the hands of a district nurse.

BIBLIOGRAPHY

- Benians, T. C.: *British Medical Journal*, 1911, i, 864.
 Chaput, H.: *Presse Méd.*, October 3rd, 1918.
 Hobbs, J. E.: *Surg., Gynecol. and Obstet.*, liv, No. 5, 839.
 Chitty, H.: *British Medical Journal*, 1929, i, 347.

A TREATMENT OF SYDENHAM'S CHOREA

BY

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The treatment of Sydenham's chorea, as conducted at present, may be said to resolve itself into enforced rest and the use of drugs. The most popular drugs for this purpose are probably salicylates, aspirin, chlorthal, arsenic, and nirvanol. Although much can be said in favour of the use of nirvanol, there are those who raise objection to it, and who state that harmful effects may arise from its administration even when the greatest care is taken. Of the others none is of proven and specific value in the treatment of this disease. Rest is the fundamental and most important mode of treatment; the drugs play a secondary part. It is almost impossible to secure complete rest in the patient's own home; especially is this so when dealing with the hospital class of patient, and it is among this class that the disease is most prevalent. Moreover, rest to be effective must be prolonged. The result is that we have throughout the country large numbers of cases of chorea occupying beds for extensive periods in the hospitals supported by voluntary contributions. If there could be discovered a satisfactory method of treatment that would bring about a quicker cure it would be a source of great economy and convenience, as well as of satisfaction to the patients' parents. The possibility that there is such a method has now been demonstrated with success by Dr. Lucy Porter Sutton of Bellevue Hospital, New York City. It was observed by her that an intoxication with fever resulting from phenobarbital therapy, when occurring in a case of chorea, caused a reduction in the choreic manifestations. The conclusion was drawn that the fever itself was responsible for the effect. On this basis it appeared that the deliberate provocation of fever during the course of an attack

of chorea would be a beneficial therapeutic measure. This proved to be so. The induction of fever is now used as a routine procedure in the treatment of chorea in the Children's Medical Service of the Bellevue Hospital. It is upon the observation of Dr. Sutton's methods and the experience derived from a number of patients with chorea whom it was my privilege to treat under her direction that this report is made.

TREATMENT BY INDUCED PYREXIA

Fever is induced by a triple typhoid vaccine containing 1,000 million typhoid and 750 million each of paratyphoid A and B bacilli per cubic centimetre. Other methods of causing artificial fever have been used and are at present being investigated, but the typhoid treatment is at present most commonly employed. The routine is as follows.

On the day following admission to hospital the patient is submitted to a thorough physical examination to make sure that there are no contraindications to treatment. The degree of chorea exhibited in the various limbs at rest and upon the performance of combined movements (walking, dressing, mastication) is estimated and classified as severe, moderate, or mild; this is done so that the daily progress may be roughly noted. It should be carried out each day before treatment. On the day treatment is commenced the patient receives a light breakfast (that is, no food within a short time of the induction of fever). The pulse and temperature are taken immediately before the typhoid vaccine injection. It is advisable to take the temperature rectally, as it is hard to estimate it accurately elsewhere once the fever is in progress. The vaccine is administered intravenously. It is customary to begin with 0.05 or 0.1 c.cm., as a reasonably high temperature is usually obtained with fairly small doses following the initial injections. The patient is then placed in a "blanket" bed, and is supplied with several hot-water bottles. It must be emphasized that the patient requires the most careful observation and attention from the nursing and medical staffs during the course of the fever. The desired object is the attainment of a temperature between 104° F. and 105.5° F. and its maintenance for four hours. At first it should be taken hourly, but once it is above 103° it is as well to take it every thirty minutes. The only objection to the temperature being taken frequently throughout the treatment is that each disturbance of the bed tends to lower the patient's temperature. Once the temperature is rising well it is advisable to remove the hot-water bottles.

During the course of the treatment the patient's thirst may be relieved by sips of water; copious draughts should not be allowed, as they may be harmful and also have an antipyretic effect. No food should be given; even without it vomiting may occur in a few cases. The earlier after injection the required degree of fever is reached the more likely is the temperature to go on rising. In these cases it is necessary to remove some of the bedclothes until the next temperature is read. The patient should be carefully watched. At the end of the period of desired hyperpyrexia the patient is placed between sheets and the temperature allowed to fall. But this is not an occasion for the relaxation of nursing attention. The temperature should be taken regularly until it is normal again. If it rises above 106° efforts should at once be made to bring it down. The bedclothes should be removed and the patient covered only with a sheet. A tepid sponging should be given and aspirin (5 grains) administered. In addition, an ice-bag may be applied to the head. The tepid sponging should be continued at intervals of a few minutes until the temperature is below 106°. It is not usual for it to reach this height, but if it does harmful effects do not ensue: 106° is used as an indication for active measures, as it is well inside the limits of safety. If the patient has been carefully watched this degree of pyrexia should not be reached at all, as it should have been possible to regulate the temperature by adjustments of the bedclothes, based on previous observations. In this connexion it is important to note whether the patient is of a type that sweats easily or not. In those who do not sweat much the temperature is apt to rise fairly rapidly to a considerable height, and close attention is therefore indicated. With patients who sweat easily there may be difficulty in getting the required temperature, and they should be wrapped closely in their blankets when it is seen that the temperature