sweetened condensed milk is the best food ; its low fat value is an advantage.

(w) *Gastro-enteritis* (+).—This dangerous condition is rare in breast-fed babies at home ; but it is an ever-present risk in institutions. Vomiting and diarrhoea are accompanied by the essential symptoms of sudden anorexia, grave weakness, and dehydration. Immediate drastic treatment consists in total withdrawal of milk for one, two, or more days, the substitution of sweetened alkaline water, the giving three or four times daily of small doses of magnesia (a half to one teaspoonful), and parenteral salines. Meantime, lactation is maintained ; but breast milk is resumed only when the colour and the strength of the baby have improved and there are signs of hunger and returning appetite. At first the breast milk, given by bottle, should be skimmed and diluted. In the acute stage a little sweetened tea twice daily is of value.

(x) *Failure to Gain Weight, and Poor Appetite* (+).—This condition is common at the end of the first week. Hunger and appetite can be restored quickly by the withdrawal of two or three breast-feeds and the substitution of sweetened water preceded by half-teaspoonful doses of magnesia. This can be repeated, if necessary, on a second day.

(y) *Febrile Illness in the First Month* (+).—This may be dehydration fever or any other sharp and transient febrile illness. The dietetic treatment is the withdrawal of breast-feeding for 12 to 24 hours and the substitution of abundant sweetened fluid ; and here, again, the diuretic and diaphoretic action of tea infusions can be used with good effect. Breast-feeding can then be resumed.

(z) *Etcetera* (+).—Among all other pathological states in the baby during the period of breast-feeding—whether organic, structural, functional, or infective—while some may require a temporary withdrawal or modification of breast milk, there is not one which contraindicates breast-feeding.

Conclusion

This brief epitome of breast-feeding makes a crowded presentation of a large and complicated problem of dietetics. In other branches of dietetics the doctor and the nurse are not concerned with the production of the food, nor with its conveyance to the patient, but only with doling it out. But in breast-feeding we have to supervise all three operations ; and before we can do this we must know and understand the processes that underlie lactation, suckling, and digestion. Only when we are instructed in this primary knowledge can we manage the normal dietetic problem of breast-feeding. And when we are so instructed we can then understand and deal successfully with the derangements that may upset these three physiological processes. It would not matter much if we had mastered the problem of the infant dietetics of cows' milk, complicated as it is with the far greater risk of infection. For in using cows' milk we face the double problem of malnutrition and infection, and our failure is shown in our high infant death rate.

Human milk is a food perfectly designed in its chemistry for the digestion and nutrition of the infant ; and in the arrangements for its supply and consumption it is almost proof against infection ; with these supreme advantages, it is also the cheapest of all human food, and the least troublesome to give.

But breast-feeding is not an automatic process ; and its inauguration is attended by many checks and difficulties. Most of these difficulties can be overcome by knowledge and patient effort ; and in this paper I have tried to set out in an orderly way the common difficulties and their simple remedies. The general neglect and mismanagement of breast-feeding has existed so long that its failure has become accepted as an inevitable effect of our civilized society. Actually it is one of the major problems that have to be faced in any serious effort to reduce our infant death rate. At the present time of dearth and war the mismanagement of breast-feeding, with its resulting waste of food wealth and life, is a matter of national concern. Every doctor and nurse who has the responsibility of advising and assisting mothers in breast-feeding ought to urge its continuation wherever possible and as long as possible, and give their best thought and effort to overcome any difficulties that may arise. They should pause and think more than twice before they recommend weaning in the first month or two of life.

ULCERO-MEMBRANOUS STOMATITIS

THREE ATYPICAL CASES

BY

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An investigation of 90 cases of ulcero-membranous stomatitis was recently undertaken, and of these, 87 were, on clinical and bacteriological evidence, classified as Vincent's disorder, while 3, which were atypical, form the basis of this paper.

Atypical Forms in the Literature

Reports in medical literature tend to show that atypical forms of ulcerative stomatitis are not uncommon ; they occur sporadically, sometimes in association with other diseases and sometimes alone. In most cases the condition bears a certain superficial resemblance to Vincent's infection, but the clinical course is usually different, as the chief features emphasized are the degree of toxæmia, the prevalence of complications, and the mortality.

In a rather different category is a group of cases showing a variety of skin lesions with similar manifestations in the mouth. Of these the most important are pemphigus vulgaris, erythema multiforme, and dermatitis herpetiformis. Up to recent times these cases were diagnosed on the clinical findings, but few attempts seem to have been made to investigate the bacteriology or the blood picture. Pemphigus is pre-eminently the disease in which most difficulty is encountered in making a differential diagnosis, as the bullae may first appear either on the lips or in the mouth. Matis (1940), in describing 5 cases of pemphigus in which the lesions were entirely confined to the mouth, points out that the diagnosis rested on the identification of the typical bulla, which ruptured in a few hours, and states : "Following rupture, the flaccid pellicle sloughs off, leaving a superficial ulcer, which promptly develops a marked secondary inflammatory reaction." Erythema multiforme, which also produces a bullous lesion in the mouth, may be another source of difficulty, but again the diagnosis must rest on the discovery of the typical lesion.

In describing cases of atypical ulcerative stomatitis some authors have applied the term "streptococcal." Costello (1931) reports a number of cases of coincident sore throat and sore mouth in children. The lesion in the mouth was apparently pustular in type, not dissimilar to the bullae of pemphigus, and on rupture it left behind a superficial ulcer. Culture from the contents of these lesions gave an almost pure growth of haemolytic streptococci. Similarly, Mead (1932) gives an account of several cases of alleged streptococcal stomatitis in which the clinical features were mainly those of an acute marginal gingivitis. Culture from these cases usually resulted in a mixed growth of *Str. viridans* and *Staph. aureus*. In none of them, however, was the condition reminiscent of ulcero-membranous stomatitis in the full clinical sense of the term, nor were any of the patients seriously incapacitated by the disease.

A very different disorder was recently described by Walton and others (1941) in which the severity of the local condition, ulcero-membranous in type, was completely overshadowed by the alarming prostration and acute illness of the patient. The clinical features of the 3 cases bear such a striking resemblance to those of Walton that it is felt they may belong to the same group. They have in common the following characteristics: (1) The patients were acutely ill, with the manifestation locally of a wide-spread ulcerative stomatitis, associated with a conjunctivitis. (2) Swabs from the mouth failed to reveal the presence of Vincent's organisms in significant quantity, but streptococci were grown on culture. In Walton's cases the organism was believed to be a streptococcus of the *faecalis* type. (3) There was no response to sulphanilamide or sulphapyridine therapy, but the patients appeared to improve after blood transfusion.

The histories of the 3 atypical cases in the present series are as follows:

Case I

An A.C.2 aged 19 was admitted to hospital on May 17, 1940. Seven days previously he had had a slight sore throat, which had abated until, two days before admission, it had recrudesced simultaneously with the appearance of a sore mouth.

When first seen he was obviously very ill; cyanosis and dyspnoea were present, and the temperature was 104° F. and the pulse rate 140. He complained of dysphagia, and trismus had developed. The mucous membrane of the lips, gingiva, and soft palate was covered with a whitish-grey tenacious exudate, which on removal revealed shallow ulcers that bled freely. Haemorrhage, in fact, was observed from all the gingival margin, which was grossly hypertrophic. Smears taken from the mouth showed a few Vincent's organisms, together with large numbers of Gram-positive cocci. Aerobic culture gave an almost pure growth of haemolytic streptococci. The Wassermann reaction was negative. A general examination revealed no gross abnormality except the presence of moist rales at the left base. Sulphanilamide was given in preference

FIG. 1.—Case I. Acute phase 5 days after admission, showing bilateral conjunctivitis and blepharitis; oedema, bullae, and crusting of lips; and skin lesion. In the collar area the vesiculation, erythematous base, and central red spot can be seen.

to sulphapyridine, and the patient received an initial 24-hour dosage of 8 g.

The following day he seemed to have improved slightly and the temperature had fallen to 100° F. A skin lesion was now present; this took the form of a vesicular eruption on an erythematous base, and was first noticed on the left forearm and in the collar area. In addition conjunctivitis appeared, and a sticky discharge covered the lid margins (Fig. 1). On the fourth day a tentative diagnosis of pemphigus was made, and it was proposed to continue the sulphanilamide for a full course. The patient's general condition had begun to show a rapid deterioration; the temperature had risen again, he was taking little nourishment, and the prostration was alarming. It was therefore decided to try the effect of a blood transfusion, and 500 c.cm. of fresh citrated blood was administered. At this time the skin lesion had reached its maximum extent, and bullae were present on the arms, legs, and chest, with one on the glans penis. Smears from the mouth failed to reveal Vincent's organisms, and culture gave a heavy growth of haemolytic streptococci, both α and β . The white cell count was 13,000 per c.mm.

The following morning the patient was greatly improved, and during the next 4 days the temperature showed a gradual return to normal. On May 24 the chest was radiographed and evidence was found of a resolving bilateral bronchopneumonia. Blood culture from a specimen taken on May 19 was sterile, as was a culture from the exudate in one of the bullae. Further smears from the mouth again showed the presence of Gram-positive cocci, and culture gave an almost pure growth of haemolytic streptococci.

From about this time onwards the skin lesion started to fade and in the mouth the membrane began to separate, leaving behind a painful haemorrhagic surface. Oedema of the lips was still manifest as late as May 27 and the ulceration appeared tardy in healing. It was not until June 5 that the mouth lesion was completely resolved.

The patient was discharged from hospital on June 21, and so far as can be ascertained no other attacks have occurred.

Case II

A corporal aged 19 was admitted to hospital on Oct. 20, 1940, having been transferred from his local sick-quarters. For 5 days he had had a sore mouth, which had ulcerated 2 days

FIG. 2.—Case II. Acute phase 8 days after admission, showing ulceration and formation of small bullae on lips, and bilateral conjunctivitis, with some discharge present on lid margin.

before his admission. On the day previously his eyes became sore and he had awakened in the morning with the lids stuck together by discharge. He gave a previous history of having had a similar attack, in which a skin lesion had followed. This attack had never been satisfactorily diagnosed, but it was apparent that he had been gravely ill.

On examination the patient appeared restless and anxious; he was of a greyish pallor and slightly dyspnoeic, but no abnormal signs were present in the heart or lungs. The temperature was 100° F. and the pulse 120. A purulent conjunctivitis was evident, but no skin lesion except a residual staining from the previous attack. Inspection of the mouth showed an extensive ulceration, with a thick dirty white exudate, membranous in character. This covered the gingiva and the mucous membrane of the floor of the mouth, the cheeks, and palate. The lips were only slightly involved, but were oedematous. The white cell count was 12,000 per c.mm., with 74% polymorphs, and a swab from the mouth revealed a few Vincent's organisms, culture giving a mixed growth of haemolytic streptococci, pneumococci, and *M. catarrhalis*. The Wassermann reaction was negative.

The patient was placed on a full course of sulphanilamide, with an initial 24-hour dosage of 8 g. The drug was continued

for 6 days. He showed little improvement; the temperature was gradually rising and toxæmia was evident. A skin lesion appeared on the third day after admission, being first detected on the back in the scapular region and on both arms. The lesion was tender to pressure and similar in appearance to erythema multiforme.

On Oct. 24 the temperature reached 103.5° F., the pulse was thready, and the general condition appeared alarming. Prostration was evident; the patient was unable to take nourishment because of dysphagia, and oedema of the soft palate caused great distress. The skin lesion had extended, and was present on the buttocks, the lower limbs, and the dorsum of the penis. Two of the lesions had central vesiculation, which does not show in the photograph (Fig. 3). The white cell count was 7,800 per c.mm. A further swab from the mouth was identical with the first.

On the basis of the dramatic improvement that had taken place in Case I, a transfusion of 500 c.cm. of fresh citrated blood was given by slow drip. A rigor occurred shortly after the transfusion had begun, but despite this the procedure was completed.

On Oct. 25 the patient both looked and felt better; the temperature had fallen to 100° F. and the cedema of the soft palate was less. In the interim period mild non-specific treatment had been given to the mouth, which had shown a

FIG. 3.—Case II. Eight days after admission. Old staining can be seen in large patches on the trunk, buttocks, and posterior aspect of upper arms. Recent purpuric lesions are mostly within limits of previous staining.

gradual improvement; the membrane had separated in places, leaving behind a shallow ulcer. The skin lesions began to fade, and by Oct. 30 had disappeared completely. Smears from the mouth taken on Oct. 26 and 30 failed to show the presence of Vincent's organisms, and culture on both occasions gave an almost pure growth of haemolytic streptococci. Swabs from the eye did not reveal any organisms, and the blood culture was negative. Figs. 2 and 3 illustrate the condition as it appeared 8 days after admission.

The patient showed continued improvement, and the temperature remained normal after Oct. 27. The mouth, however, was slow to heal, and it was not until Nov. 5 that all ulceration had ceased. The patient was discharged on Nov. 12.

Case III

This patient, aged 18, was admitted to hospital on June 27, 1941, as a transfer from his local sick-quarters, 5 days after the onset of a severe stomatitis, which had been diagnosed as Vincent's infection.

On examination he presented a severe ulcero-membranous stomatitis involving the gingiva, the mucous membrane of the

cheeks, the lips, and the soft palate. There was a single bulla on the tip of the tongue. The membrane was tenacious and not easily separated, and was grey in colour. His lips were swollen, trismus was present, and he complained of dysphagia. The breath was not fetid. The patient's general condition was fair, but he looked toxic. The temperature was 103° F., the pulse rate 120, and the respirations 36; moist sounds were evident at the left base. He had an angular conjunctivitis, with filmy strands over the cornea. Smears taken from the mouth failed to reveal Vincent's organisms, and culture gave an almost pure growth of *Str. viridans*. A smear of the conjunctival exudate revealed a few pus cells and an occasional diphtheroid, but no other organisms. At this time the white cell count was 13,000 per c.mm.

Treatment during the next two days was mainly expectant, non-specific measures being applied locally. The patient's general condition, however, deteriorated, and as the clinical signs and a radiograph of the chest were compatible with a basal pneumonia, a course of sulphapyridine was started on June 29—30 g. in all. On July 4 the drug was withheld, but as the temperature still remained over 100° F., and on the experience in the previous two cases, a small transfusion of 350 c.cm. of fresh citrated blood was given. There was an evident improvement in the patient's general condition following the transfusion, but it was not so dramatic as in the first two cases.

Up to this time the mouth condition had remained more or less static, but by July 7 the membrane was beginning to separate, leaving behind shallow ulcers, which healed with great rapidity.

Further smears from the mouth had been taken, but on no occasion were Vincent's organisms seen, and culture gave an almost pure growth of *Str. viridans*. No skin lesion developed at any time. By July 17 the patient had improved considerably and his condition had ceased to cause any grave concern. The blood picture showed haemoglobin 94%, red cells 5,340,000 per c.mm., and white cells 5,800 per c.mm. The mouth, however, was still unhealed, although the conjunctivitis had practically disappeared. Cervical adenitis, which had been a pronounced feature in this case, was now nearly absent.

The ulceration in the mouth was healed by July 22. The temperature had remained normal since July 9, and the patient was eventually discharged from hospital on Aug. 7.

Discussion

Three cases of an atypical ulcerative stomatitis have been described which at first sight bore a strong resemblance to Vincent's infection of an acute and widespread type. Clinically, this resemblance was only superficial; for in each case purulent conjunctivitis was present, foetor oris was never marked, and two cases developed skin lesions. Toxaemia with prostration was considerable in all three, and they showed in common a failure of response to sulphanilamide but marked improvement after blood transfusion. That the lesions were not classical Vincent's stomatitis is confirmed by the bacteriological findings.

The oral lesions could be described as ulcero-membranous in character in each case, and with one exception bullae were not found in the mouth. In addition the stomatitis preceded the appearance of the skin lesion by some days. These two facts seem to indicate that, whatever the nature of the stomatitis, it was not a manifestation of pemphigus or other primary dermatological condition.

As has been seen from the case reports, the organism mainly isolated in culture from the oral lesions of these patients was a streptococcus. In Cases I and II it was haemolytic, often in almost pure culture, and in Case III of a non-haemolytic type. Unfortunately, a detailed pathological investigation was not pursued, since facilities were not then available. However, the consistent isolation of these organisms in culture, together with the absence of other significant organisms, is of interest, and it would appear profitable to speculate on the relation of the streptococcus to the clinical picture presented.

It is known that toxic manifestations, with high temperature, toxæmic cutaneous eruptions, purulent conjunctivitis, and syndromes of a like nature may arise from a localized streptococcal infection, and although it is not suggested that in the first two cases the haemolytic streptococcus was the sole causal agent, it is believed that its presence had very considerable influence on the clinical course of the disease. In Case III the streptococcus found was of a non-haemolytic variety, and it is noteworthy that in this case generalized skin

lesions did not appear and, on the whole, toxic manifestations were less marked.

The fact that little response was obtained from the administration of sulphonamides in these cases would appear to absolve the streptococcus as the morbid factor, but cases of streptococcal infection are frequently seen in which no appreciable benefit has been obtained from this group of drugs, and, as has recently been shown, strains of haemolytic streptococci completely resistant to them do occur. Francis (1942) describes several cases of wound infection by a Group A Type 12 streptococcus resistant to sulphonamides, lack of inhibition of growth being demonstrable *in vitro*. This resistance is, however, not a specific type characteristic, and it seems likely that other types may, under suitable conditions, produce sulphonamide-resistant strains. However, quite apart from the possible presence of such a strain in these cases, the fact that a generalized toxæmic condition was well established lessened the clinical value of sulphonamide administration. Certainly, the problem becomes very different from one in which the streptococcus is proliferating in an open wound.

While it is realized that in these three cases there is not sufficient evidence to justify the conclusion that the streptococcus was the specific causative organism—in fact, a neurotropic virus might well be implicated—it is suggested that its presence influenced the clinical picture to a marked degree; and, although it is not possible to make a diagnosis until more is known of the condition, it is considered that this acute ulcerative stomatitis with its concomitant toxic syndrome constitutes a well-defined clinical entity.

Summary

In a series of 90 cases of ulcero-membranous stomatitis recently investigated 87 were classified as Vincent's disease. The remaining 3, which differed materially from the others, showed marked toxæmia and failed to respond to sulphanilamide and sulphapyridine; improvement, however, followed blood transfusion. In each of these 3 cases streptococci were isolated from the mouth lesions.

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GROUP PSYCHOTHERAPY

BY

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Group treatment if effective would have a particular value in wartime, when there is a relative shortage of doctors and, potentially at least, an increase of patients with neurosis. The number of neurotic patients who can be adequately dealt with by one doctor varies according to the type of patient and the type of treatment practised by the therapist, but, in general, 25 to 30, with an average duration of stay in hospital of about six weeks, is a reasonable estimate.

The effort-syndrome unit at the hospital to which I am attached has 100 beds and comprises patients with various mild neurotic states, all of whom are carefully examined to exclude organic disease, and all of whom have fatigue as their main symptom. They show various anomalies of vegetative function such as palpitation, postural giddiness, labile blood pressure, tachypnoea, hyperventilation, frequent sighing, sweating of an emotional distribution, hot flushes, cramps, and paraesthesiae. This vegetative lability has frequently been present since childhood, and while individual psychotherapy may lessen psychic anxiety and effect personality change the somatic symptoms often remain very resistant to treatment.

Patients with effort intolerance were first treated here by the usual psychotherapeutic measures, in addition to the general

psychiatric methods, an attempt being made to get at any major emotional factors which might help to explain the development of the patient's effort phobia. In the resulting discussion and explanation it was necessary to deal with the cardiac neurosis that was usually present. This necessitated some simple explanation of the physical accompaniments of an emotional state, but great difficulty was experienced in removing the patient's belief that he had heart disease, which was sometimes held with almost delusional intensity.

Another great difficulty was that patients did not come here seeking treatment: speaking generally, their main conflict was over Army service, which for one reason or another they disliked intensely. From contact with such men I came to the conclusion that their low morale was more satisfactorily combated by talking to them in groups than by individual interviews. One had the feeling—and this was endorsed by the nurses' observations—that in individual interviews the men fought shy of such a topic, but at night, after "lights out," would discuss freely their dislike of the Army, their grievances, and their desire for discharge, the last being amply justified because in their opinion they had heart disease, and so on. During such discussions a patient had ample opportunity for dramatizing his predicament, and there was no possible way for the other patients to verify his statements.

After two years of individual psychotherapy conducted under rather difficult conditions, as outlined above, influenced also by the need for doctors to deal with many more patients than is at present the case, it was decided to try a form of group therapy. The patients had been carefully selected and had approximately identical symptomatology: this made the problem much simpler than would usually be the case in a psychiatric ward. The treatment was tried on a group of 50 patients, the remaining 50 being given individual psychotherapy by other doctors. There were two main problems to be considered: the patient's attitude towards his symptoms, and the degree of group responsibility which he showed. These two aspects are best discussed separately.

Patients' Attitude towards Symptoms

As already stated, most of the men on arrival here had marked vegetative imbalance, which they interpreted as positive evidence of disease. A simple explanation of psychosomatic relationships did not appear to be sufficient to undermine this belief, and much more detailed instruction was indicated. The procedure adopted was to have three meetings a week at 9 a.m. on alternate days. The patients and doctor were seated comfortably, the whole atmosphere being completely informal. The junior nurses working on the wards sat at one end of the room. The talk lasted on an average 20 to 30 minutes, with a quarter of an hour at the end for open discussion. At first the talks covered a wide range of topics, including heredity, child psychiatry, the unconscious, propaganda, inferiority feelings, fatigue, relaxation, etc.; but it soon became clear that some definite system, whereby the education was more unified, was necessary. For this purpose I have found that the central nervous system is a suitable subject because it lends itself most easily to diagrammatic representation; thus, talks about the autonomic nervous system or different levels of consciousness as pure abstractions are quite beyond the average patient's comprehension, whereas the same subject taught with the use of charts or a model brain is capable of holding his attention and means something to him. For instance, the brain is explained to the group as functioning at three levels—the cortical, the thalamic, and the brain stem—which, functionally, represent consciousness and the peripheral nervous system, undifferentiated emotions, and control of visceral activity respectively. The peripheral nervous system and autonomic nervous system are then discussed in detail without, however, using medical terms or going into details of anatomy. The main point is that the men should have a rough idea of the function of the nervous system and its importance in adjusting the individual to his environment (the exteroceptive system of Cannon). The autonomic nervous system is dealt with in a similar way, its function in maintaining internal equilibrium being stressed. When the men appear to have grasped these two distinct concepts they are taught how activity or inhibition at any one level may affect