Cost.—This depends on the size of the area to be treated, as the larger this is the larger the envelope and the more solution required. For an arm, however, the hypochlorite as prepared in our hospital dispensary would cost 3½d. a day. To that is added the cost of the envelopes: no other dressings are required.

Analysis

The 24 cases involved 51 areas; these were treated as follows:

(a) *Ointment dressings* were used only for clean burns. If an area of infection developed it was quickly controlled by compresses, before it became deep or extensive. All faces except one were dealt with by this method, and 14 cases in all.

(b) *Saline Compresses.*—This method was used in 8 cases, one of which, a burnt face, healed satisfactorily in nine days. In all the others it had to be abandoned, as maceration became too marked. The method is, however, useful for a few days to clear up a limited area of infection.

(c) *Electrolytic sodium hypochlorite compresses* in solutions varying from 5 to 50% were found more effective than saline in treating infected areas, of which 7 were encountered.

(d) *Flavine in paraffin* was used in only 3 cases. It appears to have little advantage over ointment for a clean burn, and is more messy.

(e) *Triple dye jelly* was applied to 6 areas after careful cleansing under anaesthesia. In every single case almost the whole area covered became infected, superficial burns became deep, and weeks were required to heal. One needed a skin graft and another may do so. Even if perfect healing had occurred, the method was messy.

(f) *Envelope Irrigation.*—This was employed on 13 burns from the start and on 8 after infection had supervened.

Summary and Conclusions

Treatment of burns by envelope irrigation with electrolytic sodium hypochlorite has been tried in 16 cases, and the results are compared with those in 8 cases treated by other methods.

When thorough surgical technique is impossible the envelope method will minimize the dangers of infection; and when infection is already present no other method will clean the wound so rapidly or so effectively. By its use treatment is almost painless—an advantage especially noticeable in infected cases. The method is cheap and convenient, making nursing simple.

Other methods will heal a burn or bring it to the stage of grafting within comparable degrees of time, attention, and discomfort, provided all goes well. The great value of envelope irrigation is that one can be quite certain that in no case treated by it, with or without theatre cleansing, will anything more than mild infection occur. Can this be claimed for any other method?

I should like to thank Mr. Neligan, Mr. Perry, and Mr. Dix for permission to publish these cases, and to record my appreciation of the enthusiasm shown by the nursing staff despite early difficulties.

REFERENCES

- Bunyan, J. (1940). *Proc. roy. Soc. Med.*, **34**, 65.
Mowlem, R. (1941). *British Medical Journal*, **1**, 686.

The Biochemical Society would like to give any possible assistance to foreign visitors to this country who are interested in biochemistry. The following notice, published in the last programme of the Society, may be of interest: "On behalf of the Society the Committee wish to extend a cordial invitation to biochemists and others interested in biochemistry, from the British Empire and countries abroad, to attend meetings and to take part in the discussion of papers. If such visitors wish to receive programmes of the meetings and advance abstracts of papers, they should send their names and addresses to the Secretaries." The Secretaries of the Biochemical Society are: Dr. F. G. Young, National Institute for Medical Research, London, N.W.3, and Dr. W. T. J. Morgan, Lister Institute of Preventive Medicine, Chelsea Bridge Road, S.W.1.

MUMPS MENINGO-ENCEPHALITIS

BY

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Captain, R.A.M.C.

In a recent epidemic of mumps among soldiers 234 cases were treated in hospital. For the most part only the more severe cases were seen, the milder ones obtaining treatment in their own camps. In a mumps epidemic with meningeal symptoms, coming as it did at the end of a severe epidemic of meningococcal meningitis, it was not surprising that quite a few patients with mumps were sent into hospital with meningitis as the tentative diagnosis. In only 5 of these cases were the symptoms severe enough to justify lumbar puncture. In all these cases a pleocytosis was obtained in the cerebrospinal fluid. Many more cases were sent in for lumbar puncture, but the diagnosis rested largely on the recognition that such a symptom can occur. It was soon apparent that it was not necessary to have either parotitis or orchitis: the meningeal symptoms in contact cases of mumps could be presumed to be due to the mumps infection.

That meningeal involvement occurred fairly often in a mumps epidemic has been known since the middle of the eighteenth century, but it was not until 1902 that Monod described the findings in the cerebrospinal fluid. Gordon (1913) was able to produce an encephalitis in a monkey by intraspinal injections of saliva filtrates. Both Birnberg (1939) and Silwer (1936) suggest that the frequency of symptoms from the central nervous system varies from epidemic to epidemic. Pleocytosis in the cerebrospinal fluid may or may not produce meningeal symptoms. It is stated that there is an increase in cells in the cerebrospinal fluid in 50% of cases of mumps, though some authors put the figure as low as 0.1%.

Table showing Illustrative Cases

Case No.	Age	Presenting Symptom	C.S.F. Cell Types	Cells per c.mm.	Complication	Days after Onset
1	26	Parotitis	Small mononuclear; occasional large mononuclear	230	None	—
2	36	Meningitis	All lymphocytes	375	Parotitis	1
3	35	Submaxillary swelling	" "	525	Orchitis	6
4	32	Meningitis	Lymphocytes; occasional endothelial cell	1,078	None	—
5	22	"	All lymphocytes	928	Orchitis	11

No organisms were seen in any of these cases, and the cultures remained sterile. In two the C.S.F. pressure was raised, but both patients were very excited; the other cases were within normal limits of pressure. In Case 2 the fluid was not quite clear, while in Case 4 the fluid was definitely opalescent. In Case 5 no parotid swelling was seen, though a severe unilateral orchitis developed eleven days after the onset of meningeal symptoms.

If parotitis had been present the symptoms of a meningeal involvement were fairly easy to recognize. The onset varied from the first to the fourteenth day, though commonly it occurred about the fourth or fifth day. Headache, with a pyrexia generally over 100° and quite often over 102°, appeared, ushered in by nausea and vomiting. Some degree of neck rigidity was a constant finding, the patients complaining of pain in the head, neck, and back. In two of the cases head retraction was present. Bradycardia, Kernig's sign, and photophobia completed the picture of a meningeal reaction. The temperature, vomiting, and headache generally began to subside on the third day. Most patients were free from any symptoms except weakness soon after the fifth day. One patient, who was in hospital for a month, still complained of head-

aché in the mornings. He fainted the day after discharge and was readmitted with no abnormal signs but symptoms of headache and depression. After a period of three weeks' convalescence he seemed to be well again.

Treatment

It was only natural to give sulphapyridine to cases showing meningeal symptoms. If the cerebrospinal fluid is not clear there can be little justification for withholding a drug which may be life-saving. Only the first three cases in which the fluid was not clear received the drug, 9, 8, and 6 grammes being given in the twenty-four hours. Vomiting, headache, and depression were made worse and recovery was delayed. Certainly those patients not receiving sulphapyridine recovered more quickly. Eventually treatment was mainly symptomatic—*aspirin* and *phenacetin*, with copious glucose and fruit drinks. A wash-out of the stomach on the third day with bicarbonate and an enema seemed to give much relief.

Comments

Mumps is a virus infection probably spreading via the blood stream and therefore able to affect any part of the body, with a predilection for the parotid gland. In the epidemic described the number of cases of mumps with complications was high. The percentage of all cases of patients developing meningeal symptoms in the epidemic was difficult to judge, but of those admitted to hospital 30% had signs and symptoms of meningeal involvement. It is possible that the particular virus was of a neurotrophic type. The meningeal symptoms have been described as due to the parotid gland compressing the internal jugular vein. This can be discounted because not all cases have a parotitis. In the cases described no polymorphonuclear leucocytes were seen in the cerebrospinal fluid; it is therefore to be expected that sulphonamides will not alter the course of the disease. A guinea-pig received some of the cerebrospinal fluid from Case 5 intracerebrally: no rise of temperature and no apparent ill effects ensued.

REFERENCES

- Birnberg, T. L. (1939). *Minnesota Med.*, **22**, 173.
Gordon, M. H. (1913). *Lancet*, **2**, 275.
Silwer, H. (1936). *Acta med. scand.*, **88**, 355.

TREATMENT OF IMPOTENCE: A COITUS-TRAINING APPARATUS

BY

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For the purpose of this paper I understand by impotence solely the impotentia coeundi caused by disorders of erection, accompanied, nevertheless, by normal ejaculation and normal orgasm. This is the most common form of impotence. The greater number of these cases are psychologically determined. The much rarer cases of organic impotence are not taken into consideration here, although they, too, are sometimes partially determined or accompanied by psychological factors. The treatment of psychological impotence is of course mainly a psychological one. It is carried out by the usual methods of persuasion, suggestion, and analytical treatment. Sometimes physical, medicinal, or hormone therapy is applied in addition, but all these methods are efficacious mainly through influence on the mind. In the same way, treatment by a training apparatus (according to Dr. Spiegel) which will be discussed below displays its therapeutic efficiency only through its effect on the mind and will.

This apparatus aims at supporting the insufficiently erected penis at its immissio. Accordingly, it is only a mechanical expedient without any therapeutic value of its

own. It gains this value only when its application is organically fitted into the framework of an individual psychological treatment.

Psychological Impotence

Psychological impotence consists essentially in inhibitions which hamper the normal process of erection in the spinal cord so that the erection necessary for the immissio fails to occur. These inhibitions mostly consist either of conscious ideas or of unconscious and suppressed complexes and conflicts, the nature of which is disclosed by analytical treatment. But common to all cases are the fear of the failure of erection and the associated idea: "I am impotent." The erection is essentially a psychological process, and no other process is so liable to be disturbed by inhibiting ideas as that of erection, particularly in neurotic individuals. The bare idea of failure and the ensuing self-observation may be of such a strong inhibiting nature that erection fails to occur. Each new fiasco will enhance the autosuggestion: "I am impotent." In mild fresh cases without parathic superstructure this inhibiting autosuggestion may be overcome by a reassuring explanation alone. In more serious and inveterate cases the impairing basic complexes and conflicts have to be made conscious and resolved by analytical work. If this is attained to a sufficient degree, not only are the original inhibitions removed but, as a rule, also the idea of insufficiency, together with their autosuggestive consequences, so that normal erection will take place.

Sometimes, however, there happen to be cases which take quite a different course. In spite of good results of the analytical treatment, the patient fails again in an attempt to cohabit, because the habitual self-observation and mental tension hinder erection. Such renewed failure will, of course, further enhance the autosuggestion of incurable impotence and will not only nullify the past psychotherapeutic treatment but even endanger any future attempt. There will scarcely be a psychotherapist who has not experienced such disappointments while treating cases of impotence.

The Apparatus in Use

In order to overcome this embarrassment a coitus-training apparatus has proved to be very efficacious. It consists of twin splints made of thin wire which support the underside of the membrum, ending at each end in a ring. The ring at the pubal end rests upon the symphysis, while the opposite one grips the sulcus glandis, so that the glans remains beyond. In order to adjust it there are hinges at the upper side of the rings. The apparatus is to be fixed to the flaccid penis, and this takes no more time and trouble than, for example, putting on a condom. The two splints are held together at the pubal end by a small rubber ring, which makes it possible for the apparatus to adapt itself to all changes in the circumference of the penis. It is extremely light and easy to handle, and it does not hurt or irritate the male or female partner. Besides, it is so inconspicuous that the female partner does not necessarily notice it. The photograph, reproduced half-size, demonstrates this apparatus.

When the psychological treatment of a case is drawing to its close and the psychotherapist has gained the impression that the erection proper will function but, on the other hand, is afraid of interference caused by auto-suggestive influences, the patient is handed the apparatus with the necessary instructions. The conviction is imparted to him that with the help of the apparatus he will be able at any time, regardless of erection, to accomplish a coitus, and that a failure is excluded. It is very likely that the patient will soon report a perfect success. Either the erection of the supported penis was in itself vigorous enough, so that the patient was able to accomplish the