Treatment

The most effective method of treatment is the taking of food. Immediate relief is the rule (Pybus, 1946; Bett, 1952), and even the drinking of a glass of cold water may be enough to do the trick (Hughes, 1952). It is reasonable to assume that the initiation of the gastro-colic reflex inhibits the painful muscle spasm. No doubt the same result can be achieved in other ways, but the use of volatile antispasmodics, of which chloroform and amyl nitrite have been most popular, has been in my experience uniformly unsuccessful. Perhaps the spasm can be relieved by the conscious search for mental relaxation, but this is a process which even at the best of times is exceeding difficult to initiate: it would seem more reasonable to seek a solution below the conscious level, by simply taking a biscuit and a glass of milk.

The variety of the measures which have afforded relief in this complaint gives further support to the belief that it is a visceral neurosis, although it is admitted that this is a common enough happening in any complaint which is naturally self-resolving and of short duration. Each sufferer has learned from his own experience some manoeuvre which seems to help. For some the application of warmth, whether by clothing or by a hot-water bottle, may be enough; others get respite from a change in position, to the genu-pectoral (Bull, 1952), or to the squatting (Smith, 1935), or to sitting on the very edge of a chair, or even to a sitting-up position in bed. The passage of flatus may ease the pain almost immediately, as will the discharge of any particulate faecal material, however small in amount: it is likely that each only signals the relaxation of muscle spasm and the end of an attack. Commonly, the patient can expel nothing at all from the rectum, and the effort of ineffectual straining may only intensify and prolong the spasm.

Most of the other lines of treatment are largely impracticable—such as the passing of a rectal catheter, or even the giving of a small enema, warm or cold, water or oil, or even air alone. It seems likely that any success in such manoeuvres results from engaging the attention and by arousing interest, curiosity, or expectation.

Summary

Proctalgia fugax is a condition characterized by recurring attacks of pain deeply inside the rectum. The pain follows a definite pattern, and no local cause can be found to account for it. It has certain features which suggest that it is due to a sustained muscle spasm. It can be relieved most effectively by the immediate taking of food or drink.

REFERENCES

- Abrahams, A. (1935). *Lancet*, 2, 455.
 Bett, D. H. (1952). *British Medical Journal*, 1, 880.
 Biologist (1952). *Lancet*, 1, 52.
 Blyth, W. (1935). *Ibid.*, 2, 404.
 Bolen, H. L. (1943). *New Engl. J. Med.*, 228, 564.
 Bull, H. C. H. (1952). *Lancet*, 1, 424.
 Carlill, H. (1935). *Ibid.*, 2, 742.
 Carter, H. S. (1935). *Ibid.*, 2, 372.
 C.G.E. (1931). *British Medical Journal*, 2, 928.
 Gabriel, W. B. (1948). *The Principles and Practice of Rectal Surgery*, 4th ed. Lewis, London.
 Hughes, T. (1952). *British Medical Journal*, 1, 880.
 Hurst, A. (1943). *Proc. roy. Soc. Med.*, 36, 639.
 Lynch, M. E. (1931). *British Medical Journal*, 2, 927.
 McEwan, P. (1935). *Lancet*, 2, 580.
 MacLennan, A. (1917). *Glasg. med. J.*, 88, 129.
 M.C.P.F. (1935). *Lancet*, 2, 581.
 Murray, J. B. (1951). *Some Common Psychosomatic Manifestations*, 2nd ed. Oxford Univ. Press, London.
 Myrtle, A. S. (1883). *British Medical Journal*, 1, 1061.
 Neuralgia (1931). *Ibid.*, 2, 677.
 Pybus, F. C. (1946). *Ibid.*, 1, 824.
 Ryle, J. A. (1942). *Guy's Hosp. Rep.*, 91, 147.
 — (1948). *Gastroenterologia, Basel*, 73, 289.
 Septuagenarian (1935). *Lancet*, 2, 404.
 Sheppard, M. D. (1952). *British Medical Journal*, 1, 880.
 Smith, R. N. C. (1935). *Lancet*, 2, 580.
 Thaysen, T. E. H. (1935). *Ibid.*, 2, 243.
 — (1936). *Acta med. scand.*, Suppl. 78, 441.
 Tidy, H. (1952). *Lancet*, 1, 314.
 Wallis, F. C. (1909). *Ibid.*, 1, 94.

ADRENALINE CREAM

AN ASSESSMENT OF ITS VALUE IN THE RHEUMATIC DISORDERS

BY

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Adrenaline cream seems to have been used first in the treatment of rheumatic conditions by Moss in 1949 on the grounds that it might be absorbed sufficiently to cause vasodilatation in muscle and thus aid massage in patients suffering from fibrositis for which a causal "vasomotor disequilibrium" had been postulated. He claimed that all patients except those with early osteoarthritis improved, and that most were symptom-free after a few treatments. As no comparison was made with patients receiving simple massage or massage with an unmedicated cream it is not possible to assess the effect of the adrenaline component from Moss's results.

The effect of adrenaline cream was further studied by Howell (1950) in 90 patients with "fibrositis secondary to rheumatoid or osteoarthritis." In comparable groups of 20 patients there was relief of pain for more than four hours in 77% of patients massaged with adrenaline cream and in 20% of those receiving a simple cream—an apparently significant difference.

Bywaters (1951) studied 39 patients suffering from conditions associated with deep pain of symmetrical distribution. Adrenaline cream was rubbed into one side and a plain cream into the other. Improvement occurred in 29% of trials with adrenaline cream and 25% of controls. Relief was complete in 17% of 283 trials with adrenaline cream and 13% of 289 with plain cream. These differences are not significant, nor was there any significant difference in the duration of relief; it was therefore concluded that there was little difference between the effects of the two creams when administered in this way.

Present Study

The present trial was undertaken as part of a study of the value of physiotherapeutic procedures in the rheumatic diseases, and was carried out at a clinic for the treatment of rheumatism in miners. The distribution of rheumatic disorders in patients used in this study is indicated in Table II.

Two separate investigations were made: (1) a study of palliation, and (2) an investigation of recovery times.

Palliation was studied in two stages. In the first stage, carried out on a group of 65 patients, comparison was made between two creams—one containing 0.1% adrenaline, the other a simple cream base. These were so labelled that the identity of the adrenaline-containing cream was unknown either to the physician or to the physiotherapy staff, and were assigned alternatively to new patients attending. When the patient had received treatment thrice weekly for two weeks the palliative effect was assessed, and he was then transferred to the other treatment, which in turn was assessed on completion of the sixth treatment. In the second stage of the investigation, carried out on another group of 60 patients, adrenaline cream was compared with dry massage and with no massage, each patient being thus studied for three consecutive periods, the initial treatment being decided as before by a rota. As in the first stage, these treatments were given over a period of two weeks

before the assessment was made. In some patients the symptoms did not persist long enough for more than one or two treatments to be assessed. Other physiotherapeutic procedures (short-wave diathermy, radiant heat, etc.) remained unchanged throughout the period of stay.

Assessment was made of the degree and duration of relief, and was by questionnaire. The results are shown in Table I. Patients had no difficulty in deciding whether

TABLE I.—*Palliative Effect of Massage with and Without Adrenaline Cream*

	Controls			Massage with Adrenaline Cream
	No Massage	Dry Massage	Massage with Simple Cream	
Total assessments	51	45	45	101
Complete relief	5 (10%) S	8 (18%)	6 (13%) S	26 (26%) S
Partial relief	35 (69%)	35 (78%)	33 (73%)	66 (65%)
No change	11 (22%) S	2 (4%) S	4 (9%) NS	6 (6%)
Worse	0 (0%)	0 (0%)	2 (4%)	3 (3%)
Duration of relief (mean)	14 hours	17 hours	9 hours	14 hours
*Composite score	1.4	1.9	1.5	2.0

* Mean figure based on following points system: -1=aggravation; 0=no change; 1=partial relief for less than 5 hours; 2=partial relief for more than 5 hours; 3=complete relief for less than 5 hours; 4=complete relief for more than 5 hours.

S indicates that the difference is statistically significant—that is, the observed difference is more than twice its standard error. NS=Not significant.

The data in this table refer to the treatment assessments and not to the patients, since in most instances patients had two or more treatments. Each assessment is an average of the effect of six treatments.

relief was complete or partial or was non-existent, but could not always be certain of the duration of relief. Where doubt existed they were asked to state whether relief was for more or less than five hours, and this was used in the composite assessment, shown in the last line of the table.

Results

A greater proportion of those receiving dry massage showed complete relief than of those not receiving massage, and fewer showed no relief of pain, the latter point being significant, so that dry massage is evidently capable of augmenting the palliative effect of other therapeutic procedures. Massage with simple cream was less effective than dry massage, and the group treated in this way did not differ significantly from the control group, so that a lubricant of this type apparently abolished the beneficial effect of massage. Adrenaline cream, on the other hand, produced complete relief in a significantly greater proportion of patients than simple cream, and the difference between the adrenaline-cream and control groups is highly significant. A few of those on adrenaline cream, however, complained of a temporary worsening of the pain, as indeed did those on the other types of cream. The duration of relief was not greatly affected by any of these procedures, though dry massage appeared to give rather more relief than other methods. The results are summed up in the composite score, which shows that dry massage and massage with adrenaline cream produce a similar degree of palliation, but simple cream is ineffective.

The effect of adrenaline cream on recovery was investigated by a separate investigation. Alternate patients were treated with adrenaline cream throughout and until medical finality was reached, the remainder being maintained on massage with a simple cream in the same way. Medical finality was defined as recovery of such degree that treatment was no longer required, or, alternatively, there had been no improvement over a period of four consecutive weeks. All patients were put on to a rota of other physiotherapeutic measures (short-wave diathermy, radiant heat, etc.), and these were changed in strict rotation at weekly intervals in order to avoid error from the effect which such treatments might have on recovery times.

The results are shown in Table II. Altogether 64 patients were studied, 32 in each group. Both groups were closely similar: all were males; the average age was 46 in the

TABLE II.—*Effect of Adrenaline Cream on the Outcome of Rheumatic Disease*

	Adrenaline Cream	Simple Cream
Total patients	32	32
Average age	46	50
Before treatment:		
Diagnosis:		
Disk degeneration	8	8
Disk prolapse	2	2
Osteoarthritis	7	6
Rheumatoid arthritis	2	2
Other defined rheumatic disorders	4	4
Undetermined rheumatic disorders	7	7
Neurosis	2	3
Off work	14	17
On light work	8	5
On full work	10	8
Retired	0	2
Average duration of symptoms in days	38	38
Results:		
Quiescent	7	7
Improved and discharged	14	13
Improved to a point, then stationary	1	1
Improved, still under treatment	0	1
Unchanged	7	7
Worse	0	0
Non-attendance, etc.	3	2
Returned to work	11	16
Stopped work	2	0
Not known	0	1
Average days to return to work	65	32
Average days' attendance at clinic (quiescent or improved and discharged cases)	105	85

treated group and 50 in the controls; the mean duration of symptoms was identical and the diagnostic spectrum closely similar. Rather more of those in the control group were incapacitated for work, so that the control group is, if anything, of rather greater severity.

The final outcome was identical, seven patients in each group losing all symptoms and signs, and 14 and 13 respectively improving to a point where treatment was no longer required. Seven in each group remained unchanged. Apart from one who could not be traced, all those in the control group returned to work, but of those receiving adrenaline cream, three failed to return to work and two who were originally at work had to stop. This effect on incapacity is significant, and is confirmed by the delay in return to work in those who ceased to be incapacitated. This takes twice as long in those receiving adrenaline cream and the duration of treatment is correspondingly increased.

Discussion

Any investigation of palliative action must of course depend on answers to questions, and is therefore subject to influences both by the ideas of the patient and by the attitude of the questioner. Moreover, in a study such as this the attitude of the masseur must also be taken into account. Since, however, the comparison of adrenaline and unmedicated cream was carried out blind, it is unlikely that any such factors could have influenced the results in this study. The similarity of our results to those obtained by Howell (1950) is also confirmatory. With dry massage a blind trial was not of course possible, and some doubt must therefore remain about the relative influence of physiological changes and suggestion. The question is, however, academic rather than practical, relief of pain being equally acceptable to the patient, however produced. From the point of view of palliation, therefore, no advantage seems to result from substituting adrenaline cream for the normal talcum powder of the masseur.

The mode of action of adrenaline cream is by no means clear. It has been ascribed to an increased blood supply to the painful muscles due to the vasodilatation produced by adrenaline in skeletal muscle, a result which might well be augmented by the mechanical effect of the massage, and possibly also by the vasoconstriction which the adrenaline produces in the skin vessels. This would result in the tissue temperature approximating to that of the blood instead of the rather lower temperature found normally in

the more superficial muscle groups. It is known from the experiments of Kellgren, McGowan, and Hughes (1948) that pain in such structures is related to the local temperature. Such an effect must presumably depend on absorption of adrenaline into the general circulation, as penetration to site tissues by direct spread would be unlikely. This would explain the identical relief felt on both sides when adrenaline is applied to only one half of the back (Bywaters, 1951).

The delay in recovery which, as our figures indicate, follows the use of adrenaline cream may be due to interference with the pain-defence mechanism. A similar effect on recovery times has been noted when procaine is injected repeatedly into a site of pain in muscle or connective tissue. Whether dry massage produces a similar delay is at present uncertain, but is under investigation.

Summary

Adrenaline cream applied locally in a number of rheumatic diseases gives greater relief than a simple cream. Dry massage also gives greater relief than massage with simple cream or no massage at all. No significant difference was noted between the effects of dry massage and massage with adrenaline cream.

Repeated application of adrenaline cream appears to delay recovery in rheumatic diseases.

We wish to thank Dr. J. H. Kellgren, Director of the Rheumatism Research Centre, for his encouragement and advice, and Messrs. D. Mawdsley, of Manchester, for supplies of unmedicated and adrenaline cream.

REFERENCES

- Bywaters, E. G. L. (1951). *Ann. rheum. Dis.*, **10**, 359.
Howell, T. H. (1950). *Lancet*, **2**, 395.
Kellgren, J. H., McGowan, J., and Hughes, E. S. R. (1948). *Clin. Sci.*, **7**, 13.
Moss, L. (1949). *Med. Wld, Lond.*, **70**, 244.

SEZARY'S RETICULOSIS WITH EXFOLIATIVE DERMATITIS*

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The original account of this condition is contained in an article by Sézary and Bouvrain (1938). Their patient, a woman of 58, presented as a case of mild pruritus of the trunk and limbs, which became steadily more severe and extensive and was followed in two or three months by the appearance of erythematous plaques on the affected area. Fine scales developed on these plaques, and they gradually increased in size to produce a generalized erythrodermia. Microscopical examination of her skin showed a considerable infiltration of the dermis. The infiltrate consisted of round or polygonal cells with a round or oval nucleus and an indistinct nucleolus. Repeated blood examinations gave a red-cell count which varied from 3,500,000 to 4,490,000 and a white count ranging from 6,000 to 14,400 per c.mm. The blood film showed from time to time the presence of an unusual type of giant cell in numbers varying from 2 to 56 per hundred white cells. These *cellules mon-*

streuses, 12 to 14 μ in diameter, contained a large nucleus surrounded by a thin band of cytoplasm. The nucleus varied in shape, was sometimes oval or occasionally bilobed, rectangular, or lanceolate. The bone marrow contained none of these cells. Sézary believed them to be of mesenchymatous origin, but had never previously seen any similar cells.

In the discussion following the presentation of this case Civatte stated that he had seen this type of cell on three occasions. The patients in whom it was found all ultimately developed cutaneous tumours, and Civatte was undecided whether they should be regarded as examples of atypical mycosis fungoides, Hodgkin's disease, or leucosarcoma. Two further cases (Sézary, Horowitz, and Maschas, 1938; Sézary and Bolgert, 1942) closely resembled the original one, as did a fourth reported by Baccaredda (1939). All these patients died in 18 to 40 months without developing cutaneous tumours. Sézary thought it probable that the condition was related to mycosis fungoides, but felt that no more definite opinion could be given until further evidence became available.

Case History

A retired clerk aged 67 had suffered from transient rashes on the arms and legs for 16 years. The rash would last a few weeks and then clear, leaving a few residual eczematous patches which caused him no discomfort. Within one or two months there would be an exacerbation. This state of affairs continued until March, 1949, when he developed an unusually severe attack, accompanied by oedema of the legs. He was admitted to Paddington Hospital on March 14, 1949. A few days later he developed a small ulcer on the right ankle. Three weeks after this his face became red and swollen. Within a week scaling developed on the face and was rapidly followed by a similar scaling eruption on the scalp and limbs. The trunk was later affected, but not so severely as the face and limbs. There was moderate itching and considerable burning of the skin. He had had "barber's rash" when aged 45, gastric ulcer when aged 50, and seborrhoeic dermatitis causing his admission to hospital on three occasions when aged 55. His mother's brother suffered from industrial dermatitis. One brother suffers from asthma and occasional eczema.

FIG. 1.—The patient, aged 67; showing oedema of skin, pigmentation, and pseudo-ptosis. The photograph is the copyright of the Royal Society of Medicine.

Examination showed him to be a small frail elderly man weighing 8 st. 12 oz. (51.1 kg.). His temperature ranged between 97 and 100° F. (36.1 and 37.8° C.), and pulse from 96 to 108. He was melancholy and apathetic. The skin of the face was thickened, and both eyelids were distended with oedema, which gave an appearance of ptosis and collected in pockets below the eyes (Fig. 1). There was considerable scaling over the face, scalp, and limbs. On the trunk the skin was thickened and covered with fine

*Part of a thesis submitted for the degree of M.D. Cambridge.