LETTERS TO THE EDITOR

A CHEAPER PREPARATION OF DISODIUM CROMOGLYCATE IN THE TREATMENT OF ALLERGIC RHINITIS

From Major N K Cooper FRCS(Ed), DLO, RAMC

Sir, The clinical symptoms of allergic rhinitis are brought on in predisposed individuals during the pollen season by the release of histamine from mast cells in the nasal mucosa\(^1,2\) following the combination of antigen with antibody at the surface of these cells\(^3\). This process of histamine release may, however, be reduced or abolished by treatment with disodium cromoglycate, as has been demonstrated by isotope studies and electron microscopy\(^4\) utilizing preparations of excised human nasal mucosa.

Clinically, the increased sensitivity displayed by the nasal mucosa of sufferers from allergic rhinitis towards released histamine\(^5\) can also be minimised by treatment with topical disodium cromoglycate at or before the time of allergen exposure. With this in mind, twelve patients presenting at the ENT Outpatients Department at BMH Rinteln between June and September 1987 with symptoms and signs of allergic rhinitis were selected for study. Six patients were treated with Vividrin Nasenspray (Dr Mann Pharma, Berlin) and the other six with Rynacrom Nasal Spray (Fisons plc) during these months. The limited number of Vividrin samples available restricted the size of the study.

In West Germany during the months of this study, the most severely allergenic plant pollens, such as those from species of ryegrass, meadowgrass and mugwort (Artemisia vulgaris), are at the peak of their production and distribution into the atmosphere\(^2\).

Only four out of twelve patients had undergone previous allergy testing, and in each of these four patients a positive reaction to grass pollens had been elicited. In the other eight patients the history and findings alone were the criteria for their inclusion in the study. The patients ranged in age from 10 to 48 years, and consisted of eight males and four females. Each patient was instructed in the use of their respective nasal spray, and after nose blowing each patient was seen to use the spray correctly before leaving the clinic. The dosages were 0.5ml (10mg) of either preparation four times daily.

The clinical outcome of this study was that after six weeks of treatment 11 of the 12 patients reported a 50% or greater subjective improvement in their symptoms of allergic rhinitis, and all 11 patients wished to continue using their treatment for the rest of the pollen season. No side effects from treatment were reported. The remaining patient demonstrated little improvement on disodium cromoglycate treatment and eventually required cautery of his inferior turbinates and submucosal resection of his nasal septum.

Symptomatic relief of allergic rhinitis has important implications for military personnel suffering from this complaint in the field. During military operations which necessitate absolute silence, particularly at night, repeated sneezing, coughing or hawking provide an easy sound target upon which the enemy can localise their fire. The danger thus engendered to the soldier with such uncontrolled symptoms, and to his companions, has been documented in innumerable operational reports dating from the earliest records of warfare, and present day training in infantry tactics mandates platoon commanders to eliminate this hazard\(^6\).

This study demonstrates that these potentially dangerous symptoms can be successfully controlled under West German conditions by the use of two identical preparations of topical disodium cromoglycate solution, only one of which Rynacrom is currently allotted a NATO stock number for re-ordering purposes. The second preparation Vividrin is not only supplied in a smaller spray (14mls as compared with 26mls) which may be more convenient for use in the field, but is also over 40% per unit volume cheaper than Rynacrom at existing currency exchange rates\(^6\). I therefore suggest that the cheaper version should be made available to replace the more costly one. A saving of several thousand pounds sterling per year could be made if all the Rynacrom Nasal Spray dispensed at BAOR medical facilities, currently in excess of 1,100 units per annum\(^7\), were to be replaced with locally purchased Vividrin Nasenspray. Further savings could also be made through local purchase of topical disodium cromoglycate solution for ophthalmic use\(^8\).

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AIRBORNE RESUSCITATION FLUIDS
From Major N B Corner FRCS RAMC, Major A R Cope FRCS RAMC(V), Capt J B Hull RAMC

Sir, Two of the authors independently noticed that some intravenous resuscitation fluid containers ruptured on impact following a parachute descent. This not only deprived potential casualties of the contents of the containers, but it left the Medical Officer with wet kit. It was therefore decided to carry out controlled trials to ascertain the best type of container for air-portable use.

A comparison between the three common types of container was undertaken. The Polyfusor (Boots, semi-rigid polythene with snap-opening mechanism), Viaflex (Travenol, polythene bag with rubber seal) and the Haemaccel container (Hoechst, semi-rigid polythene bottle with ring-pull and rubber seal) were compared for strength.

The tests were carried out by dropping the different types of container from varying heights onto a smooth tarmacadam surface. The height at which 50% of the containers ruptured on impact with the ground was established for each type (Lethal Drop 50 or LD50) at a constant 18 degrees Celsius. Each drop was repeated 10 times using time-expired containers. The manufacturers external polythene wrapping was left in place.

The most fragile container was shown to be the Polyfusor type. Fifty percent of these ruptured when dropped from 2.5 metres, either by rupturing the polythene cylinder in 60%, or by shearing off the opening mechanism in 40% of cases.

The Haemaccel type container required a height of 10 metres to rupture 50%; none of these ruptured at or through the opening mechanism.

The strongest container proved to be the Viaflex container. Only 1 out of 10 dropped from a height of 15 metres ruptured. The results are summarised in the Table.

<table>
<thead>
<tr>
<th>Drop in metres</th>
<th>Viaflex</th>
<th>Polyfusor</th>
<th>Haemaccel</th>
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<tbody>
<tr>
<td>15.0</td>
<td>1</td>
<td>—</td>
<td>10</td>
</tr>
<tr>
<td>12.5</td>
<td>0</td>
<td>—</td>
<td>7</td>
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<td>10</td>
<td>0</td>
<td>10</td>
<td>5</td>
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<td>0</td>
<td>10</td>
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<tr>
<td>5.0</td>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>2.5</td>
<td>0</td>
<td>5</td>
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</tbody>
</table>

Type of container

It can be inferred from these results that the best type of container for use by airborne units is the Viaflex type. It was not considered necessary to determine the LD50 for the Viaflex container as the impact of a parachute descent is unlikely to exceed that following a free fall from 4 metres. The Haemaccel type is less strong but probably adequate. It has been clearly shown that the Polyfusor type of container should not be issued to airborne units if alternatives are available. It could also be argued that the Polyfusor type container is too fragile for use by conventional troops in field conditions.

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ROBERT THE BRUCE, KING OF SCOTS; THE LEPROSY MYTH
From Lieutenant Colonel (Retired) W L Sanders (Retired)

Sir, Robert the Bruce ruled Scotland from 1306 to 1329. To reach the throne he killed his rival “Red” John Comyn in front of the altar of Greyfriars Church in Dumfries, and for this double sacrilege he was excommunicated by Pope Clement V. He was excommunicated again in 1317 and 1320, this time for defying the Pope.

Throughout his reign Bruce fought both his Scottish rivals to the throne and the English who refused to recognise him as King of Scots. He finally defeated the English at the battle of Bannockburn in 1314, and although this was effectively the end of the War, it was not until 1328 that the Treaty of Edinburgh recognised Bruce as King of Scots.

In 1819 a skeleton was exhumed at Dunfermline Abbey near the place where Bruce was known to have been buried. It had a gold circlet on the skull, but, more significantly, the sternum was split. This finding was in accord with Bruce’s instructions that his heart should be taken to the Holy Land. In fact, Sir James Douglas took the heart in a silver casket to Spain, but he was heavily defeated by the Moors and the heart was brought back to Scotland and buried in Melrose Abbey, although no one knows exactly where. The most significant post-mortem findings were four or five missing teeth in the upper jaw and evidence of a previous anterior fracture. It is of importance to note that the nasal bones were intact. The missing teeth have been variously interpreted as due to trauma, periodontal disease, to the activities of souvenir hunters and to leprosy. It is impossible to say which of these theories is correct, but the presence of intact nasal bones makes leprosy unlikely.
In medieval times, although often confused with other skin diseases, leprosy was on the whole much feared. It was known to be transmissible by physical contact, and victims were subject to variable degrees of isolation. It was considered a punishment for sin. In view of this it is remarkable that if Bruce did suffer from leprosy, there is no contemporary mention of it, despite his numerous enemies who lost no opportunity to vilify him. No-one shunned his company, he attended Parliament in great state — there were fourteen Parliaments in his reign — and with his own hands he crowned his son and Princess Joan. It is also recorded that his friends visited him on his death bed.

Much has been made of Bruce’s illness in his later years, particularly as his absence from the Battle of Weardale in 1327 was subsequently attributed to leprosy. Bruce was in fact in Ireland at this time negotiating a treaty with the Irish. The first mention of Bruce’s supposed leprosy is in the Chronicle of Lanercost written by a monk of Carlisle in 1346, nearly twenty years after his death. There is no mention of leprosy by any Scottish writer of the fourteenth century and John Benbow (1375) in his epic and historically accurate poem “The Brus” does not mention it.

MacArthur was emphatic that Bruce did not have leprosy, but the myth has been revived by Rennie & Buchanan. It is not now possible to say what the illness was that affected Bruce intermittently for years, or, indeed, what his final illness was, but there is no evidence at all that he suffered from leprosy.

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REFERENCES

ALL THAT WHEEZES IS NOT ASTHMA
From Colonel (Retd) D Hamilton, FRCP, L/RAMC

Sir, 80 years ago American opinion was that most wheezers were asthmatic. Some 75 years later British opinion was dragged to Chevalier Jackson’s starting point — through years in which allergy was viewed as non-existent — a disreputable means to relieve stupid women of their money.

There is a spectrum whose future natural history it is our job to assess. At one extreme is the youth whose parents advise him to report everything and who had one episode of nocturnal wheezing for a few days after a virus infection; at the other extreme is the youth who conceals the inhaler in his pocket (or forgets it) and whose condition, if his asthma is exacerbated (surgery for bronchiectasis was the worst cause) may, many of us believe, be permanently worsened. At 5 cases a week a physician will occasionally be wrong. For a patient’s future, more important than whether he joins the Army, is whether he smokes.

Apart from their being correct anyway, rules are a great help in getting through the outpatients quickly, but if we do not have to use our judgement, the assessment could well be done by a clerk. If it were done by an SIB sergeant and a PTI, how badly would they do it?

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