The earwig is said to be economically unimportant; but the hazard of staining skin and mistaking it for a malignant melanoma might be costly if future patients are evacuated from tropical countries.

I thank Dr M W Service, Liverpool School of Tropical Medicine; Mr A Brindle, Manchester Museum, Manchester University; and Dr B R Laurence, London School of Hygiene and Tropical Medicine for their help; and Mr C Forster for the photograph.

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**Galmi Hospital, BP 44, Madaoua, Niger Republic, West Africa**
ANDREW R POTTER, MB, BCHIR, medical officer (now senior house officer, Department of Anaesthetics, Royal Berkshire Hospital, Reading)

# Scrum-pox caused by herpes simplex virus

Rugby football players know that skin infections may be transmitted by bodily contact. Forwards in particular are likely to develop facial lesions from face-to-face contact in scrums. Players refer to the skin lesions by various names including "scrum-pox," "prop-pox," and "impetigo." Some of these infections are undoubtedly bacterial and there have been cases of herpes simplex[1-3] and vaccinia[4] virus infection which were either acquired or exacerbated in rugby scrums. Herpes simplex virus infection in rugby players has been called herpes gladiatorum, herpes venatorum[2] (Latin: *venator*, sportsman), and even herpes rugbeiorum.[3] During 1978-9 seven of our St Mary's Hospital first fifteen developed facial lesions, five of them caused by herpes simplex virus. All were forwards. The lesions were difficult to diagnose, mainly because two of the first three patients had particularly severe and extensive eruptions. From conversations with players in other clubs we gained the impression that skin problems had been more common and widespread than in previous seasons. We therefore decided to conduct a small survey of rugby clubs in England to investigate the extent of these infections.

## Methods and results

Swabs from our own players were placed in virus transport medium which was then inoculated into cultures of human embryo fibroblast cells (MRC5) and Vero cells. Swabs were also cultured for bacteria and fungi by standard methods. Herpes simplex viruses were typed by pock size on the chorioallantoic membrane of fertile hens' eggs. So far as we can determine from correspondence similar methods were used in other laboratories.

*Clinical details of 48 cases of skin disease (scrum-pox) in rugby football players*

| Clinical diagnosis | Laboratory confirmed | No of cases | Treatment and No of cases | | |
|---|---|---|---|---|---|
| | | | Idoxuridine | Antibiotics | None or not known |
| H simplex .. .. | + | 13 | 7 (4·8) | 2 (14) | |
| H simplex .. .. | − | 8* | 8 (5·5) | | |
| Impetigo .. .. | + | 1 | | 1 (7) | |
| Impetigo .. .. | − | 16 | | 16 (8·5) | |
| Impetigo/zoster† .. | − | 1 | | 1 | |
| Scrum-pox/prop-pox | − | 9 | | 5 | 4 (14) |

*Diagnosis based on two previously confirmed cases of identical appearance.
†Diagnosis of impetigo revised to herpes zoster on failure to respond to antibiotics.
Numbers in parentheses denote mean duration of rash in days (if known).

Seventy English rugby union clubs were selected to give a representative sample. Questionnaires were sent to their secretaries asking for details of any cases of skin disease. We specifically asked for the diagnosis, duration, and treatment of infections; the position in the field of the player; and details of possible contacts within the team and in their opponents.

Viruses isolated from the five cases in our team were confirmed as herpes simplex virus type 1. Replies were received from 30 other clubs, 13 of them reporting recent skin disease in their players. A total of 48 players were affected, of whom 47 were forwards and one a scrum-half. Of the 47 forwards 32 played in the front row of the scrum, eight in the second row, and seven in the back row. Direct contact with opponents who had obvious skin lesions was reported by 23, and 34 described similar contacts within their own team. Details of all the cases are shown in the table. Only one of the 18 cases diagnosed as impetigo was confirmed bacteriologically. Some of the 25 who had antibiotic treatment without laboratory support and were diagnosed as scrum-pox or impetigo may in fact have had herpes simplex virus infection.

## Comment

There are 1850±10 clubs registered with the Rugby Football Union in the United Kingdom. The results of this small survey of 70 English clubs suggest that there has been a nationwide problem of cross infection within rugby scrums. We have no evidence that 1978-9 was different from previous seasons although a number of players and club secretaries have expressed this opinion. We emphasise, however, that our results may be biased by the fact that the clubs reporting confirmed herpes simplex infection were associated with universities which have active virology laboratories. Only four of the clubs were attached to universities and there had been no fixtures between these teams before the time of the survey.

Some players concede that the "gentleman's agreement" which prevents them from playing if they have skin trouble tends to be forgotten before important fixtures. From the contact histories obtained in this survey this appears to occur often. Several of our own cases presented with extensive areas of vesiculation and one was admitted with pronounced systemic symptoms and shingles affecting the right third cervical nerve. Two others had received topical antibiotics for supposed impetigo before bacteriological tests were found to be negative and herpes simplex virus had been isolated. Once a firm diagnosis of herpes simplex virus infection had been established, patients were treated with topical idoxuridine (5% in dimethyl sulphoxide). The index case in our local outbreak has had two extensive recurrences in the mandibular region within three months. Every attempt should be made to achieve a laboratory diagnosis in "scrum-pox" in order to initiate appropriate therapy as soon as possible and thus to prevent spread of infection in the patient and to others. The fact that the skin disease is confined almost exclusively to forwards and particularly those in the front row strongly suggests that infection is acquired on the field and not in the changing room or communal bath.

We thank the secretaries of the rugby union football clubs who assisted us and Bristol Public Health Laboratory for details of cases in previous years. We are grateful to the medical officers of the English and Irish rugby football unions for helpful discussion.

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[2] Mare, J B, Keyzer, C M J, and Becker, W B, *South African Medical Journal*, 1978, **54**, 752.
[3] Verbov, J, and Lowe, N J, *Lancet*, 1974, **2**, 1723.
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**Departments of Virology and Bacteriology, St Mary's Hospital Medical School, London W2 1PG**
P SHUTE, medical student
D J JEFFRIES, BSC, MRCPATH, senior lecturer in clinical virology
ANNE C MADDOCKS, BM, MRCPATH, senior lecturer in clinical bacteriology

# Before-and-after comparisons: a cautionary tale

Most epidemiologists today agree that a "medical advance," be it a new drug or new technology, is best evaluated by a randomised controlled trial. This is usually accepted when it comes to drugs, but when we begin speaking of a new technology or a new surgical operation the waters become rather muddied. Then difficulties, both ethical and practical, become very obvious and when senior clinicians voice their impatience and doubts it is not surprising that others follow their lead. It seems so obvious that if results of treatment are known before the new method is introduced and are carefully monitored afterwards a simple comparison is all the evaluation required. The