THE VALUE OF BUCCAL STREPTOKINASE/STREPTODORNASE (VARIDASE) IN THE TREATMENT OF MINOR INJURIES

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STREPTOKINASE/STREPTODORNASE has been used for some time as a local application to assist dissolution of slough and fibrin. Now a tablet form—Varidase Buccal (Lederle)—has been produced which the makers claim is effective in reducing traumatic œdema and bruising when absorbed via the buccal mucosa.

The object of this trial was to prove or disprove its value in treating minor injuries.

Material

The patients were all seen in the Casualty Department of the Middlesex Hospital. They were divided into two groups: (1) Closed soft tissue injuries, i.e. bruises, hæmatomata, etc.; and (2) joint injuries, i.e. sprains.

One hundred consecutive cases of each type were collected, alternate cases being given Varidase Buccal, 1 tablet (streptokinase 10,000 units/streptodornase minimum of 2,500 units) q.i.d. for three days. The controls were given no tablets, but local treatment was the same in both treated and untreated cases.

Children under 14 years of age and patients with associated bony injury were excluded from the series.

Evaluation of Results

The criteria used for evaluating the results were the time, in days, to achieve:

- (1) Freedom from pain;
- (2) Full movements or function of the injured part; and
- (3) Disappearance of the bruise or swelling.

The mean of these three figures has been calculated and is called the 'Resolution Index'. Although this term may not be a strictly accurate

one, it makes comparison simpler than using the figures of each criterion separately.

Unfortunately nearly half the patients in each series failed to attend for adequate follow-up, and had to be excluded from the series (Table 1).

Results

These are shown graphically in Figs. 1 and 2. In the joint series the mean of the Resolution Index is 12.4 days in the controls and 8.75 days in those treated. This shows a statistically significant improvement in those receiving Varidase Buccal ($t=2.2$, $0.05 > p > 0.02$).

In the soft tissue series the mean of the Resolution Index is 9.0 days in the controls and 7.13 days in those treated. Statistically this is only suggestive that the drug produces an improvement ($t=1.68$, $0.10 > p > 0.05$).

However, if this drug produces its effect by dissolving fibrin, its maximum effect will be within the first few days. If one looks at the number of cases with a Resolution Index of 7 days or less, there is a marked difference between treated cases and controls (Table 2). In the joint series 8 out of 26 (30%) controls compared with 14 out of 24 (58%) treated patients were 'cured' in 7 days or less. In the soft tissue series the corresponding figures are 13 out of 28 (46%) controls, and 20 out of 31 (64%) treated.

Discussion

Although the figures, taken as a whole, may not be very striking there have been a few individual cases which have shown impressive results. Thus 2 cases of 'black eye' subsided completely in 48 hours; 2 cases of sprained ankle had no clinically detectable swelling after 1 and 3 days

TABLE I
PERCENTAGE of ATTENDANCES for FOLLOW UP.

	SOFT TISSUES	JOINTS
TREATED WITH VARIDASE	31 out of 50 = 62 %	26 out of 50 = 52 %
CONTROLS	28 out of 50 = 56 %	24 out of 50 = 48 %

TABLE II
PATIENTS with RESOLUTION INDEX of 7 or LESS

	SOFT TISSUES	JOINTS
TREATED WITH VARIDASE	20 out of 31 = 64 %	14 out of 24 = 58 %
CONTROLS	13 out of 28 = 46 %	8 out of 26 = 30 %

FIG. 1.

FIG. 2.

respectively; and 2 cases of finger-joint injuries had no swelling after 3 days and their movements were greatly improved, though a full pain-free range took longer to achieve.

Conversely, there have been patients who have been remarkable for their lack of response. This may have been due to improper use of the tablets, as the enzyme is inactivated by gastric juices; thus anyone who swallowed the tablets would get no benefit from them.

Our impression is that those who started treatment early got the best results; this is what one would expect from the method of their action.

Summary

Two series of patients were followed, closed

soft tissue injuries and joint sprains. A Resolution Index was used to compare results.

The results showed a definite improvement in those treated in the joint series, and are suggestive that the drug produces speedier resolution in the soft tissue series.

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