Abstract

Tranexamic Acid for Prophylaxis in Haemophilia

G. I. C. INGRAM, P. J. INGLISH, AND A. E. BENNETT

St Thomas's Hospital and Medical School, London

It has been suggested (Reid, Holburn, DeSipin, and Tocantins, 1965; Reid, Hodge, and Cerutti, 1967) that antifibrinolytic drugs might reduce the incidence of bleeding in haemophilia, although neither Poulain, Renard, Jesso (1964), Ritz (1965), nor Strauss, Kevy, and Diamond (1965) could confirm an effect with epsilon-aminocaproic acid. We therefore conducted a double-blind trial with tranexamic acid (AMCA), 2 g per day, in 15 severe haemophiliacs aged 17 to 46 years, lasting one year. Placebo or active sugar-coated tablets were given for periods of 28 days, being randomly allocated by a Latin square design. The original design, for 12 patients, could not be completely followed, but eventually 68 periods, comprising 1 887 patient-days, were observed on the placebo and 70 periods, comprising 1 939 days on active tablets. Other treatment was as usual. The patients kept records on specially designed diary sheets.

The results were analysed for site, frequency, and duration of bleeding, whether or not intravenous treatment was required and if so how much, and for disability expressed as days off work, in bed, or in hospital.

No significant differences could be detected overall in the number, duration, or need for treatment of bleeds occurring under the two regimes (Table I), or in the degree of disability resulting (Table II).

	Placebo	*Tranexamic Acid*
Number of events	262	233
Mean duration (days)	4·6	5·1
Intravenous treatment given (events)	168	166

Table I *All bleeding*

Results adjusted to equal time periods

In particular, bleeding assigned to joints did not differ either in incidence or in the need for intravenous treatment (Table III).

	Placebo	*Tranexamic Acid*
Days off work	30	24
Days in bed	14	22
Days in hospital	8	7

Table II *Disability*

Results adjusted to equal time periods.

	Placebo	*Tranexamic Acid*
Number of events	166	144
Number requiring intravenous treatment	109	102

Table III *Bleeding assigned to joints*

Results adjusted to equal time periods.

Epistaxis was recorded by five patients on 80 placebo days and on 35 tranexamic acid days; 86 out of the total of 115 days were contributed by one patient, in whom nearly half the records were made in the first quarter of the study, in three consecutive placebo periods followed by one tranexamic acid period; these results are therefore difficult to assess. Episodes of haematuria were only recorded by three patients on placebo days, and also a single incident by one of these patients on tranexamic acid.

We therefore conclude that there is no general evidence of a prophylactic effect in severe haemophilia of taking 2·0 g of tranexamic acid daily, although possibly the incidence of epistaxis may be reduced in especially susceptible subjects.

We are grateful to Messrs Kabi of Stockholm who provided the tablets and defrayed expenses, and to the patients who kept the records for us.