

Clinical Observation of Baiao Lumbrokinase in the Treatment of Unstable Angina

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Baiao lumbrokinase is a purified protein hydrolysate initially isolated from special earthworms by the Biophysics Institute of Chinese Academy of Science. It contains plasmin and tissue plasminogen activator activities, and can dissolve fibrin directly, reduce blood viscosity, and improve (reduce) platelet aggregating function; thus it is ideal for the treatment and prevention of embolic and thrombotic illnesses.

1. Patient Selection & Method:

Thirty-two patients admitted to our hospital for unstable angina between May 1998 and November 1998 were selected for treatment, and only twenty patients completed the treatment. Of the twenty patients, 14 were males and 6 were females with ages between 40-73 years and an average age of 54.3 +/- 12.5 years.

1.1 Selection criteria:

Unstable angina must fit the definition of new onset, progressive, spontaneously occurring or post-MI angina that responds poorly to nitroglycerine. People with normal CK-MB level, EKG changes, and MI were excluded in the selection.

1.2 Treatment method:

Patients were given 2 capsules of lumbrokinase supplied by Baiao Pharmaceutical Ltd. before meals three times daily for 10 to 14 days.

1.3 Evaluation:

Plasminogen, plasmin, APPT, PT, fibrinogen, platelet aggregating function, and C-reactive protein were tested prior to and 10-14 days post treatment. The treatment was considered as "markedly effective" if the product of angina frequency times duration was decreased 80% or more, as "effective" if the number decreased more than 50% but less than 80%, and as "ineffective" if the number is less than 50%. The total effective rate was calculated by adding the markedly effective rate to the effective rate.

2. Results:

Of the twenty subjects treated with lumbrokinase, the results were deemed markedly effective in 10 cases (50%), effective in 6 cases (30%), and ineffective in 4 cases (20%). Two patients complained of mild skin rashes, and no other adverse reaction was reported.

Blood Parameters Before and After Lumbrokinase Treatment

Tested Parameter	Pre-Treatment	Post-Treatment
PT	0.72 ± 1.2	1.0 ± 0.8
APTT	20 ± 4	21 ± 5
Fibrinogen	5.32 ± 2.1	3.36 ± 1.7
Plasminogen	318 ± 88	218 ± 47
C-Reactive Protein	13.47 ± 5.2	7.88 ± 3.8
Plasmin	115.4 ± 21	89.6 ± 18
Platelet Aggregation	42.2 ± 5.0	39.8 ± 3.0
	67.4 ± 6.3	41.2 ± 5.2

3. Discussion:

Oral lumbrokinase appears to be an effective agent for unstable angina, and can markedly improve blood viscosity and reduce hyper-aggregation of platelets. Lumbrokinase has no serious side effects and is safe. It has a good potential in the treatment of coronary arterial diseases and unstable angina, especially in hyperfibrinogenemia patients.