0521

10:00 h

SUCCESS RATE OF FIBRINOLYTIC THERAPY IN FRESH AND OLD DEEP VEIN THROMBOSIS. W. Theiss, A. Wirtzfeld and P. Maubach . I. Medizinische Klinik der Technischen Universität München, Munich, FRG.

It is still a wide-held belief that fibrinolytic therapy can clear thrombi from deep veins only while they are fresh. We have therefore analysed retrospectively the phlebographic results obtained in 85 patients, all of whom had fibrinolytic therapy for thrombosis of the iliac and/or femoral veins with symptoms present for 1 day to 8 weeks prior to treatment. Streptokinase (n=46), urokinase (n=9), or both drugs successively (n=30) were administered according to our guidelines as recently outlined in detail (Klin. Wschr. 58:521, 1980; Med. Klin. 75:580, 1980) particular emphasis being placed on sufficient duration of thrombolytic therapy with no a priori time limit.

The number of cases grouped according to the lenghth of their history and their respective phlebographic outcome as well as the duration of thrombolytic therapy are listed in the table.

Symptoms for .. days		1 - 7	8 - 14	15 - 28	29 - 56
Results:					
Complete resolution		23	6	3	ø
Partial resolution		15	8	8	1
No relevant change		7	3	5	6
Duration of thrombol.th.	median	7	6	8	14
	days range	3 - 18	3 - 17	2 - 26	3 - 21

It can be seen that the success rate was good, when the patient presented with a delay of up to 2 weeks; even during the third or fourth week of the thrombotic episode two thirds of the patients could still be improved. Thereafter the results were uniformly poor.

Conclusion: Iliofemoral venous thrombosis can be treated successfully with fibrinolytic drugs for much longer after its onset than is generally accepted.

0522

10:15 h

COMBINATION THERAPY OF SULPHINPYRAZONE AND FIBRINOLYTIC ENHANCING AGENTS IN THE MANAGEMENT OF RECURRENT THROMBOPHLEBITIS IN BEHCET'S DISEASE. A.M. Afifi, Department of Haematology, Maadi Armed Forces Hospital, Cairo, Egypt.

The efficacy of combined sulphinpyrazone and fibrinolytic enhancing drugs in preventing recurrences of superficial and deep thrombophlebitis in 15 patients with Behcet's disease was compared with that of fibrinolytic enhancing agents and placebo in a double blind crossover trial. Patients in the trial developed recurrent superficial and deep thrombophlebitis while on anticoagulants and immunosuppresive drugs. Analysis of the treatment results revealed that both protocols were virtually equipotent in controlling superficial thrombophlebitis as evidenced by reduction in the number of these episodes to 14% or less by either protocols. This contrasts with the wide difference in the response rate of the deep vein thrombosis in the two protocols, where 10 patients (66%) developed deep thrombotic episodes during therapy with placebo and fibrinolytic enhancing agents while only 3 (20%) developed these episodes during therapy with sulphinpyrazone and fibrinolytic enhancing agents. This statistically significant difference in response rate, ($p<0.01$) suggests that sulphinpyrazone is particularly effective in preventing recurrences of deep thrombophlebitis in Behcet's disease.

0523

10:30 h

VENOUS VOLUMETRY IN THE ASSESSMENT OF THE POST-THROMBOTIC LIMB. C.V. Ruckley, H.M. Crawshaw and J. Seaton. Peripheral Vascular Clinic and Department of Clinical Surgery, Royal Infirmary, Edinburgh, Scotland.

The reproducibility of venous volumetry has been evaluated in 20 normal legs (N), 20 legs with primary varicose veins (VV) and 30 with stable post-thrombotic chronic venous insufficiency (CVI).

The test has shown significant differences between the groups in mean relative expelled volume (EV rel, ccs): N 1.65 ± SD 0.66; VV 1.01 ± 0.40; CVI 0.64 ± 0.39 and in half refilling time (T3 secs): N 23.9 ± 11.5; VV 11.8 ± 7.4; CVI 3.6 ± 1.8. The percent coefficients of variation in tests repeated at intervals of up to a month were as follows:

	Normals	VV	CVI
EV rel % CV ±SEM	13.6±2.1	20.3±3.6	21.5±3.0
T3 % CV ± SEM	28.2±4.4	21.0±3.8	28.6±4.9

The reproducibility of the test confirms its value as a non-invasive means of measuring the severity of post-thrombotic venous disease and thus as a means of assessing response to treatment. Serial volumetric tests on 25 patients before and for up to 12 months after Linton operations for chronic venous insufficiency show significant early improvements in expelled volume. But in many of these patients the refilling time tends to remain short indicating residual valvular incompetence and the possibility of clinical relapse in the long term.

0524

10:45 h

OBJECTIVE ASSESSMENT OF LATE RESULTS OF TREATMENT OF DEEP VEIN THROMBOSIS. V.V. Kakkar and D. Lawrence. Thrombosis Research Unit, King's College Hospital Medical School, London, England

There have been few prospective clinical studies where the haemodynamic status of the deep venous system has been assessed objectively following an episode of deep vein thrombosis (DVT). Recently, a foot plethysmograph has been developed in Sweden which allows haemodynamic changes in the venous system to be measured accurately. The purpose of this prospective study was to investigate the haemodynamic changes that may occur following treatment of DVT using heparin or thrombolytic therapy.

113 Patients were included in this prospective study. None of these had suffered previous DVT or had signs and symptoms of the post-phlebitic limb at the time of initial treatment. In each case the diagnosis was established by ascending phlebography. In 79 of these patients, thrombus (>5 cm) was confined to the calf veins only. Initial treatment in these patients consisted of heparin in therapeutic anticoagulant dosage (adjusted according to APTT) for 7 days. Oral anticoagulation with Warfarin was commenced on the 5th day of treatment and continued for a minimum of 3 months. The remaining 34 patients had extensive thrombosis involving femoral, popliteal and iliac veins; in 32 of these calf veins were also involved. They received streptokinase therapy for a period of 5 days; the loading dose of 500,000 IU of SK was followed by a maintenance dose of 100,000 units per hour. Thrombolytic therapy was followed by heparin for 3 days and concurrent anticoagulation with Warfarin, the latter being given for a minimum of 6 months. In both groups, ascending phlebography was repeated on the 6th or 7th day to assess the extent of lysis or propagation of the thrombus. Haemodynamic assessment by foot volumetry was performed at 6,12 and 24 months following the initial episode of DVT. 77% Of 34 patients who sustained major DVT and received SK and 16% of 79 patients with calf vein thrombosis treated with heparin had evidence of severe haemodynamic impairment equivalent to that seen in the established post phlebitic syndrome