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SAFE DOSING OF LMW HEPARIN IN HIP SURGERY. U. Hedner (1), T. Mätzsch (2), D. Bergqvist (2), H. Fredin (3), P. Østergaard (1). NOVO Res. Inst., Bagsvaerd, Denmark (1), Dept. of Surg. (2) and Dept. of Orthopedics, University of Lund, Malmoe General Hospital, Malmoe, Sweden (3).

An enzymatically degraded low molecular weight heparin (mean mol wt 4900 dalton, LOGIPARIN, NOVO Industri, Denmark) was given s.c. in a dose of 35 XaI u/kg b.w. once daily to 10 patients undergoing elective hip surgery in order to study the plasma levels of XaI and IIaI activity and with special regard to safety. The XaI activity in plasma was ≤ 0.24 XaI u/ml and the IIaI activity ≤ 0.043 IIaI u/ml. No bleeding complications were observed, and no increase in per- and postoperative blood loss was seen in the present study. It is therefore postulated that plasma levels of the XaI and IIaI activities within the range obtained are safe with regard to bleeding complications for the LMW heparin used and in the dose administered. No accumulation was seen, which may contribute to the safety. No phlebographically verified thrombi were registered but the antithrombotic efficacy of the dose regimen used remains to be demonstrated in a larger number of patients under controlled conditions, a study that is well under way.

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PROSPECTIVE STUDY ON DOSE SCHEDULE OF HEPARIN THERAPY FOR DIC COMPLICATION IN LEUKEMIA PATIENTS. H.Sadakata, H.Iri, T.Uchiyama, K.Andoh, H.Tanaka, N.Kobayashi and T.Maekawa. The Third Department of Internal Medicine, School of Medicine, Gunma University, Maebashi, Japan.

From the retrospective analysis of correlation between the activity of tissue factor (TFA) of leukemia cells (LC) and DIC complication in patients with acute leukemia, we have already reported an adequate dose schedule of heparin treatment for DIC can be calculated in accordance with the TFA of LC. To evaluate this dose schedule, the prospective analysis was designed. Prior to the remission induction chemotherapy, TFA of LC obtained from 67 patients with leukemia (ANLL: M1;5, M2;22, M;34, M4;8, M5;4, M6;3, CML-BC: 11) was measured by Nemerson's two-stage method reported previously. Regardless of DIC complication, continuous heaprin therapy with 0, 15,000 or 9,700X + 9,000 units/day (X:logarithm value of TFA) was started with chemotherapy in patinet with 0, 0.8-4.1 U or >4.1 U of TFA, respectively. The complete remission and significant decrease of LC were achieved in 16 patients with ANLL and 5 patients with CML-BC, respectively. In 20 patients whose LC had 0.8 U of TFA or more (group A), 15 and 1 patients were complicated by DIC before and after start of the chmotherapy, respectively. DIC was improved in all of these patients. Other 4 patients were not complicated by DIC. There was no major bleeding due to heparin administration. In 47 patients whose LC had less than 0.8 U of TFA (group B), 40 patients were not complicated by DIC throughout the observation period. Remaining 4 and 3 patients were complicated by DIC before and after start of the chemotherapy, respectively. Among these patients, only one, whose DIC was due primarily to endotoxinemia, failed in control of the DIC. Consequently, in 67 patients subjected to this study, only one patient died of complicated DIC, although 17 patients (group A:4, group B:13) died of various causes other than DIC during the observation periods. These results suggest that our dose schedule of heparin is appropriate for both prevention and treatment of DIC complication in leukemia patients.

DEEP VEIN THROMBOSIS AND PULMONARY EMBOLISM

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ASSESSMENT OF DIAGNOSIS OF DEEP VENOUS THROMBOSIS OF THE LOWER LIMBS USING ESTIMATION OF CLINICAL PROBABILITY. B. Krahenbuhl, E. Sheybani and H. Bounameaux. Angiology Unit, University Hospital of Geneva, CH-1211 Geneva 4, Switzerland.

The value of a diagnostic test (or test combination) depends not only on its sensitivity and specificity but also on the prevalence of the disease. In the present study, we have re-assessed the value of the clinical diagnosis in a group of 45 consecutive patients suspected of deep venous thrombosis (DVT) of the lower limbs. The clinical probability (CP) of the diagnosis was estimated on a clinical basis alone (history and clinical examination) by trained physicians (2-month training in an Angiology Unit). Afterwards, the diagnosis of DVT was established using the combination of Doppler ultrasounds and venous occlusive plethysmography. Venography was performed when the non invasive techniques were inconclusive.
DVT was found in 14 patients (31 %). In the 21 patients in whom CP was ≤ 0.20, there was no DVT. In the 10 patients in whom CP was ≥ 0.80, DVT was confirmed in 9 cases. When CP was between 0.21 and 0.79, a DVT was found in 5 out of 14 patients.
Thus, when CP is ≥ 0.80 or ≤ 0.20, further investigation does not seem to provide additional diagnostic information. The estimation of CP by a trained physician allows to define a subgroup of patients in whom the clinical diagnosis is valuable. Two third of the patients in our series belong to this subgroup. In one third of the patients, CP was intermediate and non invasive tests or venography are necessary.
Since the range of clinical probability in which clinical diagnosis is reliable will depend on both the physician and the recruitment of the patients (medical or surgical, ambulatory or hospitalized), it must be determined in each center.

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VENOGRAPHY (VG) OF THE LOWER LIMBS IN THE MANAGEMENT OF PATIENTS WITH SUSPECTED PULMONARY EMBOLISM (PE). W.H.J. Kruit, A.K. Sing, G.J.H. den Ottolander, A.C. de Boer, J.J.C. Jonker. Departments of Medicine and Radiology, Municipal Hospital Bergweg, Rotterdam, Holland.

In a prospective cohort study, we evaluated X-ray VG in the management of non-surgical patients with clinically suspected PE. Thusfar follow up is available on 131 consecutive patients with suspected PE. In all patients a perfusion lungscan (PS) was carried out within 24 hours. In case of a normal PS (group A, n=32), no anticoagulant (AC) therapy was given. In case of an abnormal PS, AC therapy was started (heparin) and a bilateral ascending VG was carried out within 72 hours. In 46 patients (group C) venous thrombosis (DVT) was demonstrated by VG, and these patients were treated with AC for 6 months. In 53 patients with suspected PE and an abnormal lungscan, bilateral VG did not show DVT (group B). AC therapy was discontinued in these patients. These patients were then screened for 14 days with fibrinogen legscanning and impedance plethysmography (IPG), followed by IPG alone every 2 months for at least 1 year. In group B, 6 patients died in the follow up period. None of the patients had signs of PE at autopsy. One additional patient in group B developed DVT documented by repeat VG, 6 months after entry into the trial. According to these preliminary data, it seems safe to base the decision whether or not to treat a patient with suspected PE with AC, on the presence or absence of DVT in the lower limbs as demonstrated by VG.