1407

COMPARISON BETWEEN INITIAL AND ACHIEVED ANTICOAGULATION LEVEL WITH PHLEBOGRAPHIC EVOLUTION IN PATIENTS WITH DEEP VEIN THROMBOSIS TREATED BY DIFFERENT HEPARINS.

R. FAIVRE, Y. KIEFFER, D. DUCELLIER, F. BILSTEIN, J.P BASSAND, J.P MAURAT - Unit of thrombosis and haemostasis, cardiology department, University Hospital St-Jacques, BESANÇON, FRANCE

Effectiveness of standard heparin (SH) in patients (pts) with deep vein thrombosis (DVT) remains contreversial in regard with the subcutaneous (sc) or intravenous administration route.

To determine the relation between initial (day 1 after the beginning of treatment) and achieved anticoagulation level with base-line to control (at day 10) phlebographic score variations, we carried out a randomized study including 68 pts with acute (less than 2 weeks) DVT treated either by SH, 500 ui/kg/day or low molecular weight heparin (LMWH, CY 222, institut Choay, 750 u anti-Xa IC/kg/day), both given by 2 daily sc injections for 10 days. Plasma was collected at the middle (at 8 a.m) of 2 sc injections to evaluate aPTT (CK prest, STAGO) and anti-Xa activity (Stachrom, Stago). The results show that : 1/ Thrombus reduction was similar (thrombolysis more than 30%, 65% in SH pts and 64% in LMWH pts, p NS) ; 2/ in SH pts, phlebographic score variations were correlated neither with achieved anticoagulation level (mean aPTT of day 3, 5, 10) nor initial day 1 aPTT (R=-.33 and R=.03 respectively) ; 3/ in CY 222 pts, no modification of aPTT was observed during the 10-day treatment, and phlebographic score variations were correlated neither with initial nor achieved anti-Xa activity (R=.06 and R=.24 respectively) ; 4/ only 2 SH pts extended DVT and 1 patient in each group developed a recurrent pulmonary embolism in spite of a well initial or achieved anticoagulation level (aPTT $>$1.5 the control value in SH pts).

In conclusion, SH- or LMWH-related anticoagulation (or antithrombotic) effect is certainly not the sole prognosis parameter for well achieving venous thrombolysis in patients with DVT.

1408

ANABOLIC STEROID AND INTRAPULMONARY HEPARIN IN THE PREVENTION OF POSTOPERATIVE DEEP VEIN THROMBOSIS.

K.Zawilska /1/, A.Tokarz /2/, P.Psuja /1/,P.Szymczak /2/, S.Kawczyński /2/, M.Zozulińska /1/,Z.Turowiecka /1/, J.Sowier /2/. Department of Haematology /1/ and Department of Surgery /2/, Academy of Medicinie, Poznań, Poland.

150 patients over 40 years old undergoing major abdominal surgery were divided into 3 groups:
1/ group I - receiving a single injection of long acting anabolic steroid /nandrolone phenylpropionate, 50 mg intramuscular/ a day prior to surgery
2/ gropup II - receiving the same dose of anabolic steroid plus a single dose of heparin /800 U/kg of body weight/ intrapulmonary a day prior to surgery
3/ group III - receiving only a single dose of heparin /800 U/kg of body weight/ intrapulmonary a day prior to surgery.
The deep vein thrombosis /DVT/ was detected using the 125 I-fibrinogen test. The occurence of DVT was:
in group I - 14%
in group II - 4%
in group III - 8%
There were no detectable haemorrhagic complications in patients of group I and III, in 6% of patients of group II a sgliht increase of intraoperative bleeding and/or wound hematoma appeared.
We conclude that prophylaxis of DVT in the postoperative period with the single dose of anabolic steroid and intrapulmonary heparin is an effective, safe and easy to handle procedure.

1409

PLASMA DEHYDROEPIANDROSTERONE SULPHATE CONCENTRATIONS AND DEEP VEIN THROMBOSIS AFTER MAJOR ABDOMINAL SURGERY.

G. Mellbring (1), J. Chotai (2) and T.K. Nilsson (3). The Departments of Surgery (1), Social Medicine (2) and Clinical Chemistry (3), Umeå University Hospital, Umeå, Sweden.

Dehydroepiandrosterone sulphate (DHEAS) is a major secretory product of the human adrenal gland. Its precise functions are uncertain, but it has been postulated as a discriminator of life expectancy and aging. We have previously reported significantly lower plasma levels of DHEAS pre- and postoperatively in men developing DVT after major abdominal surgery, as compared to patients who remained free of DVT. Recent data suggest that the DHEAS concentration is also independently and inversely related to death from cardiovascular disease in men over 50 years of age. We here report data on preoperative plasma concentrations of DHEAS (measured with RIA) in 96 patients over 40 years of age, who underwent major abdominal surgery, and correlated the result to the development of postoperative DVT as diagnosed by the ^{125}I-fibrinogen uptake test.

Thirty patients (31%) developed postoperative DVT during the first ten postoperative days. The plasma levels of DHEAS were significantly lower in the patients with postoperative DVT compared to those without (median 1.95 umol/l; Q_1-Q_3 1.30-3.00 vs. median 3.35 umol/l; Q_1-Q_3 1.60-4.70; $p < 0.02$). Ninety per cent of the patients who developed postoperative DVT had a DHEAS value lower than 3.9 umol/l, while 45 % of the patients who remained free of DVT had a DHEAS value higher than 3.9 umol/l.

In conclusion, the data suggest that a low preoperative value of DHEAS predisposes the development of postoperative DVT in patients undergoing major abdominal surgery. It seems like the DHEAS concentration in plasma can be a valuable factor in a predictive index for postoperative DVT in those patients.

1410

THROMBOSIS PROPHYLAXIS IN TOTAL HIP ARTHROPLASTY PATIENTS USING A COMBINATION OF PHYSICAL METHODS.

J.A. Caprini, J.C. Kudrna, and A.S. Mitchell, Northwestern University Medical School, Chicago, IL., and Evanston Hospital, Evanston, IL., USA.

Lowering the incidence of thromboembolic events in patients undergoing total hip arthroplasty remains a high priority and various drug and physical method protocols have been devised to achieve this goal. We report here our experience using full-length antiembolism stockings (TED), full-length sequential compression devices (SCD) and the continuous passive motion device (CPM) to prevent thrombosis in patients undergoing total hip procedures. 106 consecutive patients were enrolled in this protocol, including 80 primary and 26 revision hip arthroplasties. Cement was used in 40 primary and 12 revision procedures. Our population was composed of 46 males and 60 females ranging in age from 30 to 92 years. The prophylactic protocol included TED hose preoperatively and during surgery, with application of SCD and CPM in the Recovery Room. These patients had immediate leg elevation and were ambulated within 24-48 hours postoperatively. SCD/CPM devices but not the TED hose were removed for ambulation and discontinued when the patients were fully ambulatory. All patients had preoperative coagulation studies and were monitored postoperatively using doppler ultrasound, strain gauge plethysmography and daily radioiodinated fibrinogen scanning. Contrast venography was done if any clinical signs or symptoms appeared and to confirm or rule out thrombi in all those with equivocal or abnormal flow studies or scans. Patients receiving antiplatelet drugs and anticoagulants were excluded from the study. Deep vein thrombosis developed in 4 of 106 patients (3.8%) postoperatively, including 3/4 above-knee clots. 2/4 also had minor pulmonary emboli. All were successfully treated with anticoagulants and no fatalities occurred. Patient acceptance of these devices was very high and no one refused to use either the SCD or CPM appliances. Minor skin irritation occurred in about 3% and was the only side effect. Our results indicate that this combination of physical methods is highly effective in lowering the incidence of thromboembolism following total hip replacement without any serious side effects.