

TERMINAL PLASMIN DEGRADATION PRODUCTS OF DUCK FIBRINOGEN. T. Krajewski¹, P. Nowak² and C.S. Cierniewski¹. ¹Department of Biochemistry, University of Łódź and ²Department of Biophysics, Medical School of Łódź, Łódź, Poland.

Previously we have found that duck or goose fibrinogen are built up of α_1 , β and γ chains like mammalian one. However, they are more sensitive to proteolytic action than pig fibrinogen and rapidly form the D-E complex. The aim of this report is to characterize terminal plasminic products of duck fibrinogen. The protein was digested in the presence of calcium ions with human plasminogen activated by streptokinase. Degradation products were firstly analysed by polyacrylamide gel electrophoresis, secondly, isolated by DEAE-cellulose chromatography and gel filtration on Sephadex G-100, thirdly, characterized in order to establish their peptide composition and amino acid content. Three fragments, namely fg-D_H, fg-D_M and fg-D_L as well as single fragment E were identified among final degradation products. Under conditions used, fg-D_H was the major form of fragment D with molecular weight of about 100,000. For fg-D_M and fg-D_L, fragments M_r 89,000 and M_r 80,000 have been found, respectively. All fragments differed in the length of gamma chain remnants which varied from M_r 42,000 to M_r 34,000. Only a single population of fg-E with M_r 43,000 was identified in plasminic degradation products. The constituent peptide subunits of that fragment were also characterized. Fg-D appeared to be a strong inhibitor of fibrin monomer polymerization both in homologous /duck fibrin monomers/ and heterologous /pig fibrin monomers/ systems.

RAPID RADIOIMMUNOASSAY FOR FIBRINOPEPTIDE A IN HUMAN PLASMA. B.J. Woodhams & P.B.A. Kernoff. Haemophilia Centre & Haemostasis Unit, Royal Free Hospital, London, UK.

The originally-described method for assay of fibrinopeptide A (FPA) in human plasma includes alcohol precipitation and dialysis steps which are complex, time consuming, and limit the applicability of the assay. The purpose of this work was to devise an assay for FPA which could be more easily applied to clinical studies, and to use this assay to study some of the factors which might cause artefactual results on blood samples obtained from patients. A rapid method for FPA assay has been developed which is simple, robust and sensitive and allows results to be obtained within 2.5 hrs. of blood collection. The assay depends on the use of bentonite to absorb fibrinogen from plasma, and gives a normal range for plasma FPA (0.3 - 1.5 pmol/ml) which is similar to that measured using the originally-described method. There is an equally good correlation between results obtained by the two methods on samples obtained from patients with various levels of circulating FPA and/or fibrinogen/fibrin degradation products (FDPs). Following venepuncture, FPA levels in sequential samples of blood drawn through 19-gauge 'Butterfly' needles became progressively lower in successive samples, indicating that a larger than usual discard of blood is necessary if basal levels are to be accurately assessed. Different antisera showed differences in affinity for FPA and cross reaction with des amino tyrosyl FPA, but such differences are unlikely to cause problems when assaying clinical samples. Generation of FPA from whole blood in vitro is completely suppressed by heparin/Trasylol anticoagulant in conventionally-used concentration, and we therefore find no evidence in favour of the suggestion that this anticoagulant mixture is unsuitable for sample collection for FPA assay.