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6. Decreased Fibrinolytic Activity and Urinary Excretion of Steroids in Takayasu's Disease and the Favorable Effect of Anginin (Bradykinin Antagonist) Treatment[†]

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In the 3rd Department of Internal Medicine of Tokyo Medical and Dental University Hospital, 21 patients were diagnosed as TAKAYASU's disease (pulseless disease) during 2 years period from 1963 to 1965. Their ages ranged between 18 and 52 years and all were female. In these patients the blood coagulability, blood fibrinolytic activity, plasma fibrinogen level and urinary steroid hormone excretion were subjected to the present study.

Total platelets count and adhesive platelets count were within normal limits in all 7 cases studied. One-stage prothrombin time and calcium clotting time were also almost within normal ranges.

The whole plasma clot lysis time had a tendency to prolong and in one case it was 12 days. Euglobulin lysis time measured by NIEWIAROWSKI's method markedly prolonged in moderate and severe cases (Group 2, 3) and slightly prolonged in mild patients (Group 1). In 6 cases in which fibrinolytic activity were analysed with fibrin plates methods, euglobulin lysis are

decreased in 3 cases and in other 3 cases fibrin plates were not dissolved at all, but the lysis area produced by euglobulin fraction with

Fig. 1. Euglobulin lysis time in patients with pulseless disease

[†] (Received for Publication, July 26, 1965)

streptokinase were normal or greater than controls. Furthermore, it was noted that antiplasmin titer was so high that heated fibrin plates were not dissolved at all in 5 cases even if 2000 ~ 5000 units/ml of plasmin solution were added to the patients plasma. Plasma fibrinogen levels were also significantly elevated in moderate and severe groups and there were significant correlation between plasma fibrinogen level and erythrocyte sedimentation rate ($r = 0.94$). Cryofibrinogen was detected in 4 of 6 cases and especially in one case it was strongly positive.

As for urinary steroid hormones excretion, in 5 non-treated patients with corticosteroids, 17 ketosteroids and 17 OH corticosteroids excretions were decreased in both proliferative and progestational phases except 17 keto-steroids in progestational one compared with that of 10 healthy nurses, although no abnormal estrogen and pregnanediol excretions were demonstrated. Steroids treatment and anginin treatment were attempted in our cases. In 4 of 5 cases treated

with corticosteroids, beneficial results were obtained and their prolonged euglobulin lysis time and elevated plasma fibrinogen level exhibited a tendency to return to the normal level in all cases. Anginin was tried in three cases with successful results. It showed a dramatic effect for a patient suffering from severe carotid pain syndrome (Fig. 2). The prolonged euglobulin lysis time and elevated fibrinogen level returned to the normal level and all patients treated are progressively favorable in the course of more than one year under anginin medication (one gm. daily p.o.).

In summary. A decreased blood fibrinolytic activity, elevated plasma fibrinogen level, cryofibrinogenemia, and decreased excretion of urinary 17 KS and OHCS with almost normal blood coagulability were noted in 21 patients diagnosed as TAKAYASU's disease. These abnormalities were improved on steroids and also dramatically on anginin.

Fig. 2. Clinical course of a patient suffering from pulseless disease