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# **RISK FACTORS FOR RECURRENT THROMBOSIS AND CAUSE OF DEATH IN PATIENTS WITH ANTIPHOSPHOLIPID SYNDROME; a Swedish cohort study**

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## **Background:**

In patients with the antiphospholipid syndrome (APS), recurrent thrombosis is common despite anticoagulation and the mortality rate is high. Identifying high risk patients is challenging, due to the low incidence of APS in the population. Consequently, there are few larger longitudinal studies.

## **Aims:**

To estimate the incidence on re-thrombosis and death, evaluate the impact of cardiovascular (CV) risk factors and antiphospholipid antibody (aPL) profiles on re-thrombosis and identify causes of death in a novel APS-cohort.

## **Methods:**

This retrospective cohort study comprises all patients identified with APS in the electronic medical records at Karolinska University Hospital, Sweden 2014-2020. Descriptive statistics was presented as median and interquartile range (IQR). Cox proportional hazards regression analyses were used to investigate the effect of risk factors. Ethical approval was obtained from the Swedish Ethical Review Authority (2020-02333).

## **Results:**

217 patients were included in the cohort. Age of APS-diagnosis was 43 years (IQR 31–55) and 66% were women. During follow-up, 37 re-thrombosis occurred; 23 arterial and 14 venous events, with an incidence of 3.4 per 100 person-years (95% CI: 2.4–4.7). Significant CV risk factors for re-thrombosis were current smoking; hazard ratio 2.50,  $p=0.03$  and chronic kidney disease; 3.44,  $p<0.01$ . Twenty-seven (73%) patients with re-thrombosis were triple positive for aPL compared to 113 (48%) without any event at follow-up ( $p<0.01$ ). The cumulative death incidence was 4% ( $n=12$ ) with sepsis due to bacterial infection being the

most common cause. The median age at death was 63 years (IQR 51–71) and occurred 8 years (IQR 2–10) after diagnosis.

**Conclusion:**

APS-patients suffering re-thrombosis are more likely to have multiple CV risk factors, with smoking and chronic kidney disease being most important. APS-patients are susceptible to sepsis following bacterial infection with high mortality. The treatment of APS-patients should be regularly assessed for concordance to current guidelines.