

## Increased risk of blood clots on the lung for patients with autoimmune diseases

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Autoimmune diseases, in which the immune system attacks the body, are fairly common. Thyroid diseases, type 1 diabetes, rheumatoid arthritis, psoriasis and inflammatory bowel disease are some examples. Autoimmune diseases are associated with increased inflammation in the tissue, which in some cases is linked to an increased propensity to develop clots in the veins.

"The most dangerous complication of a blood clot is a blood clot on the lung", says Associate Professor Bengt Zöller, who is the principal investigator for the study, which was carried out at the Centre for Primary Health Care Research in Malmö, Sweden.

The study involved 535 000 patients who had been admitted to hospital for 33 different autoimmune diseases. The risk of a blood clot on the lung was compared with the risk for individuals who had not been admitted to hospital for an autoimmune disease. The risk was adjusted to account for other diseases, age and socioeconomic factors. The results show that 31 of the 33 autoimmune diseases studied were associated with an increased risk of a blood clot on the lung.

"The risk was particularly high in the first year – around six times higher on average in all the groups with autoimmune diseases compared with the control group. For some of the diseases, the risk was even higher in the first year", says Bengt Zöller.

The diseases that stand out are idiopathic thrombocytopenic purpura



(lack of platelets caused by an immune response), systemic lupus erythematosus (SLE), polymyositis (muscle inflammation), dermatomyositis (skin and muscle inflammation) and polyarteritis nodosa (inflammation in medium-sized arteries), which all had at least a tenfold risk increase. Rheumatoid arthritis, a relatively common disease, was associated with a sevenfold increase in the risk of a blood clot on the lung. Type 1 diabetes entailed a sixfold increase in the risk of a blood clot on the lung in the first year following hospital treatment.

"The risk of a blood clot fell with time. It was still around 50 per cent higher after 1-5 years, yet there remained an increased risk for up to ten years after the first admission to hospital for many autoimmune conditions", stresses Bengt Zöller.

The research suggests that it is possible that patients who have been admitted to hospital for <u>autoimmune diseases</u> require preventive treatment for <u>blood clots</u> in the same way as following major surgery.

"However, further controlled studies are needed to determine the effect of preventive treatment", says Bengt Zöller.

## Provided by Lund University

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