

# RISK FACTORS FOR PREGNANCY ASSOCIATED DEEP VENOUS THROMBOSIS A CASE - CONTROL STUDY

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## ABSTRACT

**Background:** Deep Venous Thrombosis (DVT) is an important cause of morbidity and mortality in pregnancy and puerperium.

**Objective:** The aim of this study was to determine the risk factors for developing pregnancy associated DVT.

**Study, design, site and population:** This is a case-control study and was carried out at Kenyatta National Hospital. The study population were women in pregnancy or puerperium seen at the hospital.

**Materials and Methods:** The cases were patients admitted with DVT confirmed by Doppler ultra sound in pregnancy or puerperium and the controls were women attending the antenatal and postnatal clinics who had no complaints suggestive of DVT. The sample size was 48 cases and 48 controls. Cases and controls were matched for age plus or minus 2 years, and whether pregnant or in puerperium. Data was collected using an interviewer-administered questionnaire. Doppler ultrasound was done to confirm diagnosis among the cases, and laboratory investigations for haemoglobin level, blood group and HIV status were carried out. Data was collected from July 2008 to June 2009. Data was analysed using EPI INFO software.

**Results:** DVT accounted for 0.35% and 3.3% of admissions of patients in pregnancy and in puerperium respectively. Most cases were aged 20-24 years (31.4%). The commonest presenting complaint was pain in the left lower limb (41%). The cases had lower socio-economic status than controls ( $p = 0.003$ ), were of lower parity (72% para 0-2), and were more likely to have delivered vaginally ( $p = 0.01$ ). History of combined oral contraceptive pills, level of activity and obesity were not found to be different between cases and controls. Cases were however more likely to be anaemic compared to controls (mean haemoglobin concentration 10.5% vs. 11.9%,  $p = 0.02$ ).

**Conclusion:** DVT is not an uncommon cause of admission in pregnancy and puerperium in KNH. Anaemia was identified as an important risk factor for development of DVT in this population.

**Recommendation:** There is need for further research with greater power, to establish the risk factors of DVT in this population, as most risk factors established from findings in other studies were not found to be significant. There is need to implement strategies to reduce anaemia in pregnancy which may in turn reduce the incidence of DVT.