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## Changes in the diameter and valve closure time of leg veins in primigravida women during pregnancy

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The aim of this study was to monitor the changes that develop in leg veins of primigravida women during pregnancy. Sixty primigravida women volunteered to undergo clinical evaluation and duplex ultrasound examination of both lower limb veins to monitor changes in vein diameter (D) and valve closure time (VCT) during pregnancy and 3 months postpartum by using Duplex ultrasound. A total of four readings were taken for each subject, one reading for each trimester and the last reading was at 3 months postpartum. The mean ( $\pm$ SD) age of participants was  $26.82 \pm 2.47$  years. 39 limbs (32.5%) and 65 limbs (54.2%) developed C1-C3 venous changes during the second and third trimesters, respectively. Three months postpartum, 36 limbs (30%) continued to have C1-C2 changes. Only four limbs in 4 subjects developed varicose veins along the great saphenous vein and their VCT was more than 1 second. These subjects were found to have family history of varicose veins. Duplex examinations showed that there was a gradual increase in the D and VCT from the second through the third trimester of pregnancy in all examined venous segments. These changes were statistically significant by Friedman and related-samples Wilcoxon-signed rank tests within the same legs ( $p=0.001$ ) but not between legs in the same subject ( $P>0.05$ ), even when adjusted for body mass index ( $p=0.001-0.049$ ). In primigravida, lower limb veins showed gradual increase in vein D and in VCT starting from the second trimester. These changes reverted to baseline in most cases three months after delivery.

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