

**Novel application  
of parameters in  
waveform contour  
analysis for  
assessing arterial  
stiffness in aged and  
atherosclerotic subjects**

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Although contour analysis of pulse waves has been proposed as a non-invasive means in assessing arterial stiffness in atherosclerosis, accurate determination of the conventional parameters is usually precluded by distorted waveforms in the aged and atherosclerotic objects. We aimed at testing reliable indices in these patient populations. Digital volume pulse (DVP) curve was obtained from 428 subjects recruited from a health screening program at a single medical centre from January 2007 to July 2008. Demographic data, blood pressure, and conventional parameters for contour analysis including pulse wave velocity (PWV), crest time (CT), stiffness index (SI), and reflection index (RI) were recorded. Two indices including normalized crest time (NCT) and crest time ratio (CTR) were also analysed and compared with the known parameters.