

Assessment of the elasticity properties of the ascending aorta in patients with subclinical hypothyroidism by tissue Doppler imaging

Avaliação das propriedades de elasticidade da aorta ascendente em pacientes com hipotireoidismo subclínico por imagem de Doppler tecidual

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Elastic properties and wall movements of the ascending aorta can be affected by several risk factors, such as age, *diabetes mellitus* (DM), hypertension (HT), and smoking (2-6). As DM and HT are known to have an unfavorable effect on arterial stiffness (3-6), diabetic and hypertensive patients were not enrolled in our study. In addition, some inflammatory diseases (7,8), including Behçet disease, systemic lupus erythematosus, and psoriasis, which may be diagnosed by detailed physical examination and laboratory findings, may be related with arterial stiffness parameters. On the other hand, we have established that all participants in our manuscript were normal in terms of physical examination, medical history, and inflammatory markers. Studied individuals did have new diagnosis of subclinical hypothyroidism and hyperlipidemia (HL). None of them received the medication(s) for DM, HT, HL and weight loss before and during the study. In addition, we excluded subjects that received medications (such as beta-blocker and weight loss drugs) that could influence heart rate levels.

The measurement of arterial stiffness is a practical, useful, and non-invasive technique for identifying potential cardiovascular risk (9,10). Arterial stiffness may be used for early determination of patients at risk in clinical practice (9,10). Elevated arterial stiffness can independently predict cardiovascular problems in both healthy adults and subjects with clinical or metabolic disorders (2-6). As mentioned before, several factors might affect arterial stiffness, such as age, dyslipidemia, body weight, and heart failure (10). Thus, arterial stiffness alone may not provide a definitive diagnostic result to clinicians in relation to endothelial dysfunction and/or inflammation, but could be suitable as an early marker of cardiovascular risk. Therefore, we would advocate that the cardiologist and/or endocrinologist analysed other inflammatory markers if early

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diagnosis of arterial stiffness has shown that an individual is at risk for developing cardiovascular disease.

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