

Galectins, Aspects in Cardiovascular Diseases

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Abstract. *The Galectins are proteins that belongs to Lectines family, ancient group that includes 15 types of Galectines, each with an specific role. Are involved in inflammatory processes, carcinogenesis, heart diseases, morbidity and mortality related to cardiovascular diseases being still in the first place worldwide. It is important to establish a link between Galectins (Galectin-3) and the process of heart failure, atherosclerosis, heart fibrosis. This review is done to determine the diagnostic performance of Galectin-3 parameters, total cardiac enzymes and their correlation.*

Keywords: Galectin, Cardiovascular Diseases, Heart Failure, Fibrosis.

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1. Introduction.

Cardiovascular disease is one of the main burdens of healthcare systems worldwide. Assessing cardiovascular risk in both apparently healthy individuals and low/high-risk patients remains a difficult issue. (Hogas et al., 2017). In cardiovascular diseases, a multifactorial pathological process with several triggering and etiopathogenic mechanisms in atherosclerosis. Its medium and long-term repercussions, however, invariably constitute a significant cause of morbidity and mortality (Rossi et al., 2021). Inflammations is one of the cornerstones and atherosclerosis, but it is also involved in heart fibrosis. The cardiac fibrosis is a tissue repair mechanism caused by a progressive accumulation of extracellular matrix in response to injury, inflammation or stress (Blândă, V. et al., 2020). Fibrotic diseases occur in a variety of organs and lead to continuous organ injury, function decline, and even failure (Li, L. et al., 2014).

Closely related to the fibrotic process, Heart Failure (HF) is a clinical syndrome caused by a cardiac structural/functional abnormality, resulting in a reduced cardiac output and/or elevated intra-cardiac pressure at rest or during stress, leading to typical symptoms and signs (e.g., breathlessness, fatigue, elevated jugular venous pressure, pulmonary crackles and peripheral edema) (Blândă, V. et al., 2020) (Ponikowsky, P., 2016). The two major pathophysiological processes contributing to HF development are inflammation and fibrosis (Blândă, V. et al., 2020). Understanding the mechanisms