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Physical and psycho-emotional improvement in post-CABG patients undergoing cardiac rehabilitation

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Statement of the problem: Comprehensive cardiac rehabilitation is essential to both physical and psychological recovery after Coronary Artery By-pass Grafting (CABG). Cardiac ischemia can be assessed objectively peri- and postoperatively by measuring the level of Heart-type Fatty Acid-Binding Protein (H-FABP). Regarding psycho-emotional status, CABG surgery is known to trigger or amplify depression and anxiety. The purpose of our study was 1) to assess H-FABP protein levels longitudinally in post-CABG patients, first as an indicator of acute ischemic status, and then for the risk of re-infarction, and 2) to survey the patients' self-reported depression and anxiety over the course of their cardiac rehabilitation. The study was published recently, and on this occasion the authors aim to encourage discussion of selected results and further research collaboration opportunities.

Methodology & Theoretical Orientation: We present selected results of a unicentric, prospective study on 120 consecutive post-CABG patients completing 6-month cardiac rehabilitation through physical exercise, Mediterranean diet, and adjuvant antioxidant therapy. H-FABP levels were measured after surgery and at 6 months, when patients also filled out Hamilton questionnaires for depression and anxiety.

Findings: Mean H-FABP levels decreased from 60.56 to 4.81, and physical ability went from 1–2 to 4–5 METS. Depression scores improved substantially from means of 15.88 to 6.96, and median values halved. Similarly, mean anxiety scores went from 25.13 to 15.68 and median values dropped by 9%. No statistically significant associations were found between H-FABP and psycho-emotional status.

Conclusion & Significance: Patients were compliant and improved significantly in all studied aspects, which demonstrate the importance of cardiac rehabilitation. In countries like Romania, however, such programs are subject to systemic and financial limitations. Further research directions include the study of H-FABP levels in CABG patients exposed to the SARS-CoV-2 virus and who develop coronavirus disease (COVID-19) before and/or after the surgical intervention.

Recent publications

1. Razan Al Namat, Alexandru Burlacu, Grigore Tinica, Adrian Covic, Florin Mitu. Using the SYNTAX score to predict myocardial injury early after on-pump coronary artery bypass surgery: a single-centre experience analysis. Kardiochir Torakochirurgia Pol. 2020 Jun;17(2):76-82.
2. Razan Al Namat, Dina Al Namat, Manuela Ciocoiu, Marius Valeriu Hînganu, Laurențiu Șorodoc, Victoriț a Șorodoc, Liliana Georgeta Foia, Laura Florea, Cristiana Vlad, Ana Tănasă, Mihai Constantin, Daniel Cioloca, Minerva Codruț a Bădescu, Amin Bazyani, Maura Felea. H-FABP Levels and Psycho-Emotional Improvement of CABG Patients during Cardiac Rehabilitation. J. Cardiovasc. Dev. Dis. 2022, 9(8), 242.
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Biography

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