and 2D-Echocardiogram), and biochemical parameters (NTproBNP, Troponin-T and hemoglobin).

Results

65 patients were enrolled to date (male 55%) with 33 randomized to the IV-iron arm. 96.9% (vs 68.7%) achieved the primary endpoint at 4 months and were consistent at 8 months (90.9% vs 65.6%) and 12 months (90.9% vs 56.2%) for IV-iron arm versus oral iron. For secondary endpoints, an 11.14% increase in hemoglobin concentration was observed for patients in the IV-iron arm whilst those in oral iron group had a by 16.23% decrease and development of anaemia. There was greater reduction of NTproBNP in the IV-iron group (81.6% vs 66.3% reduction). Patients receiving IV-iron had a 42.98% increase in their 6-min walk test from baseline (versus 8.61% for control arm). There were no significant echocardiographic changes and no severe or serious adverse events.

Conclusion

These findings in our single-centre study support the efficacy of IV iron over oral supplements in the treatment of iron deficiency amongst Asian heart failure patients. The secondary endpoints also indicate better clinical and biochemical outcomes when iron stores are successfully repleted. Lastly, this study demonstrates the feasibility and safety of outpatient administration of high-dose IV-iron. Results from large-scale clinical studies looking at heart failure hospitalization and mortality are expected to further advance understanding.

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Reversal of cardiac damage in patients with symptomatic severe aortic stenosis following transcatheter aortic valve implantation: An echocardiographic study

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Background

Severe aortic stenosis (AS) results in cardiac damages, such as left ventricular hypertrophy, left atrial enlargement, pulmonary pressure elevation and in advanced stage, right ventricular damage. Généreux and colleagues proposed a staging classification based on these extra-valvular damages in 2017, with increasing stage representing more cardiac damage. While regression of these cardiac damages is expected following aortic valve replacement, the reversal of cardiac damage based on this staging system has not been described.

Purpose

This study aimed to describe and stage the changes in cardiac structure and function at 6 months and 1 year after transcatheter aortic valve implantation (TAVI) in patients with symptomatic severe AS.

Methods

This was a retrospective, single center, longitudinal observational study. Echocardiographic data of patients who underwent TAVI were retrieved and analysed.

Results

From May 2018 to Feb 2021, 31 patients underwent TAVI. 5 patients were excluded due to death <6 months post-procedure ($n = 2$) and incomplete echocardiographic data ($n = 3$). The mean age of the remaining 26 patients was 70.9 ± 9.4 years, 57.7% were male, and 34.6% bicuspid aortic valve. After TAVI, transvalvular aortic mean pressure gradient reduced from 45.2 ± 14.5 mmHg to 8.0 ± 5.4 mmHg ($p < 0.001$), and aortic valve area increased from 0.57 ± 0.21 cm^2 to 1.75 ± 0.68 cm^2 ($p < 0.001$). At baseline, 6-month and 1-year, the left ventricular mass index (LVMi) were 183.4 ± 60.7 g/m^2, 150.8 ± 55.3 g/m^2 and 126.8 ± 42.1 g/m^2 ($p < 0.001$) respectively; left-atrial volume index (LAVI) were 60.4 ± 22.8 ml/m^2, 51.7 ± 23.8 ml/m^2, and 48.1 ± 23.6 ml/m^2 ($p = 0.009$) respectively; left ventricular ejection fraction (LVEF) were $52.3 \pm 25.4\%$, $64.2 \pm 29.3\%$, and $62.4 \pm 12.1\%$ ($p = 0.005$) respectively. Based on the proposed cardiac damage staging for AS, at baseline 38% of patients were stage 1, 65.4% stage 2, 7.7% stage 3 and 23.1% stage 4. At 1 year, 8.3% were stage 0, 29.2% stage 1, 58.3% stage 2, and 4.2% stage 4. 12 patients (46%) showed improvement in cardiac damage staging, and the other 14 (54%) remained in the same stage.

Conclusion

In patients with symptomatic severe AS, there were overall significant regression in LVMi and LAVI, and improvement in LVEF at 1 year after TAVI. However, improvement in cardiac damage staging was observed in only 46% of patients.

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LDL reduction in subcutaneous evolocumab after 30 days: Real-world single-center experience

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Background

PCSK9 inhibitor function is to inhibit proprotein convertase receptors, which are involved in the degradation of low-density lipoprotein (LDL) receptors in the liver.

Objective

This study was conducted to assess the efficacy of subcutaneous evolocumab in LDL reduction after 30 days.

Methodology

This is a retrospective cohort study measuring LDL levels in a patient taking subcutaneous evolocumab in Hospital Universiti Sains Malaysia Kubang Kerian from November 2021 until March 2022. All high-risk cardiovascular profile patients with a high level of LDL of more than 2.8 mmol/L, taking T. Atorvastatin 40 mg ON and T. Ezetimibe 10 mg ON and taking subcutaneous evolocumab were included. The patient’s baseline characteristics were collected. LDL level and liver function tests are taken at baseline before initiation of evolocumab and 30 days after initiation. All data were entered, and descriptive analysis was done.

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