12.
Subacute Doxorubicin-Induced Cardiomyopathy with Reduced Ejection Fraction and Optimal Recovery of Left Ventricular Ejection Fraction After Medical Heart Failure Treatment

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Background: Doxorubicin, an anthracycline compound commonly used as a chemotherapeutic agent is well known to cause cardiotoxicity. It is generally regarded that once cardiotoxicity occurs, the damage done would be irreversible. Early-onset cardiomyopathy induced by doxorubicin often occurs during the 1st year after the completion of chemotherapy. Medical therapy use has been by large uncertain in its efficacy, but not all hope is lost. We report a case of a young patient with doxorubicin cardiotoxicity, who had recovery of left ventricular function with medical therapy.

Case report: A 15 years old boy being previously healthy, was diagnosed with Osteosarcoma of his right femur in Oct 2015. He had no cardiac risk factors nor family history of ischemic heart disease / congestive cardiac failure. His baseline echocardiography showed LVEF 84.5%. He underwent chemotherapy which included cumulative dose of doxorubicin dose of 450 mg/m2, concluded in February 2016. He developed failure symptoms 7 months afterwards. His LVEF had dropped significantly to 17.6% by ECHO (27% by Cardiac MRI) then with clinical right pleural effusion and ascites. Anti-failure treatment with ACE inhibitor, beta blocker, lasix and digoxin was started early while the patient was admitted. He recovered and by 1 year afterwards, his LVEF had improved to 55%. He is symptom free now.

Summary: Despite uncertain benefits of medications for anthracycline cardiotoxicity in many trials, this case illustrates marked life changing implications if therapy is successful. The patient gained his prior functional status, and what was more important is obviating the need for a cardiac transplant. As he is young, this definitely had a tremendous impact to him for the future. At such the authors advocates attempt of medical therapy regardless if this problem is encountered in clinical practice.

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13.
Association between Clinical Parameters and CRT Response

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Background: CRT is indicated for patients with severely impaired left ventricular systolic function and ventricular dyssynchrony who remain symptomatic despite optimal medical therapy. CRT is an expensive treatment with a significant non-responder rate.

Objective: To ensure appropriate use of this treatment modality, we decided to investigate whether clinical parameters can predict response to CRT in our patients.

Methods: We retrospectively reviewed all CRT patients under our follow-up since 2014. We classified them as responder or non-responder based on pre-specified ECHO and clinical criteria. An ECHO response would be: relative improvement from baseline left ventricular ejection fraction (EF) of > 15%; and a decrease in End Diastolic Volume index (EDVi) or End Systolic Volume index (ESVi) of > 15%. Clinical response was defined as an improvement of at least 1 NYHA functional class. Patients who fulfil both ECHO and clinical criteria are considered responders.

Results: We had 18 patients (17 males; mean age 58.5± 14.9 years) with a mean (EF) of 23.7±7.4% at the time of CRT implant. A positive response to CRT was seen in 8 patients (44.4%). Mean improvements in EF, ESVi and EDVi (expressed as percentage change from baseline) were 101.1%, -43.4% and -27.6% respectively in the responder group. Corresponding values for non-responders were 10%, 10.8% and 3.23% respectively. Duration of heart failure prior to implant was significantly shorter in responders vs non-responders (mean 25.8 vs 79.1 months; p value 0.001). However, no significant associations were found between response to CRT and heart failure etiology (ischaemic vs non-ischaemic), presence of AF, QRS morphology, age and pre-CRT ECHO parameters. Device parameters at implantation and 6-month follow up were not significantly different between the two groups. Response was also not associated with the stability of device parameters (defined as <20% change) or the number of documented arrhythmia episodes.

Conclusion: There was a dramatic difference in EF change between responders and non-responders. The duration of heart failure prior to CRT was the only parameter that predicted response to therapy. This emphasizes the importance of implantation timing, which may be crucial for CRT response.

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14.
Comparison of In-Hospital Mortality and Length-Of-Stay Predictors Between Elderly and Non-Elderly Acute Decompensated Heart Failure Patients at a Tertiary Heart Center in Malaysia

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Acute decompensated heart failure (ADHF) is an emergency case that is common in elderly population and is usually excluded from big studies. The lack of thorough knowledge especially in Asian population leads to elder mistreatment or under-treatment. This study aims to compare the characteristics of length-of-stay (LOS) and in-hospital mortality between elderly and non-elderly ADHF patients in a specific population. This study analyzed retrospective data from a registry taken from patients admitted for the first time because of ADHF at one tertiary heart center in Malaysia from 2009 - 2015. Then compared characteristic data to predict in-hospital mortality and (LOS) between two groups: non-elderly patient (NEP, < 60 years old) and elderly patient (EP, > 60 years old). This study enrolled 2785 patients (1158 NEP and 1627 EP) with first admission ADHF where male patients were dominant (78.2% NEP and 68.5% EP). Comorbidities of chronic diseases were higher in EP with hypertension (81.9% vs. 60.4%, P < 0.001), diabetes (67.7% vs. 57.9%, P < 0.001) and history of coronary artery disease (78.3% vs. 58.3%, P < 0.001) were the tops three. In EP, higher NT-pro-BNP > 4600 pg/ml (OR = 1.852, P < 0.001), high urea level (OR = 1.956, P < 0.001, Troponin T+ve level (OR= 1.838, P < 0.001)