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Results

1. Quality of life improves in patients with chronic heart failure and Cheyne-Stokes respiration treated with adaptive servo-ventilation in a nurse-led heart failure clinic.

**Authors**
Olseng, Margareth W; Olsen, Brita F; Hetland, Arild; Fagermoen, May S; Jacobsen, Morten

**Source**
Journal of clinical nursing; May 2017; vol. 26 (no. 9-10); p. 1226-1233

**Abstract**
AIMS AND OBJECTIVESThe aim of this study was to investigate if quality of life improved in chronic heart failure patients with Cheyne-Stokes respiration treated with adaptive servo-ventilation in nurse-led heart failure clinic. BACKGROUND Cheyne-Stokes respiration is associated with decreased quality of life in patients with chronic heart failure. Adaptive servo-ventilation is introduced to treat this sleep-disordered breathing. DESIGN Randomised, controlled design. METHODS Fifty-one patients (ranging from 53-84 years), New York Heart Association III-IV and/or left ventricular ejection fraction ≤40% and Cheyne-Stokes respiration were randomised to an intervention group who received adaptive servo-ventilation or a control group. Minnesota Living with Heart Failure Questionnaire was used to assess quality of life at randomisation and after three months. Both groups were followed in the nurse-led heart failure clinic. RESULTS Adaptive servo ventilation improved quality of life scores both in a per protocol analysis and in an intention to treat analysis. Twenty-one patients dropped out of the study, nine in the control and 12 in the intervention group. CONCLUSION Use of adaptive servo-ventilation improved quality of life in chronic heart failure patients with Cheyne-Stokes respiration. However, the drop-out rate was high. RELEVANCE TO CLINICAL PRACTICE Chronic heart failure patients come regularly to the nurse-led heart failure clinic. The heart failure nurses’ competency has to include knowledge of equipment to provide support and continuity of care to the patients.

2. Contemporary Approaches to Patients with Heart Failure.

**Authors**
Mitter, Sumeet S; Yancy, Clyde W

**Source**
Cardiology clinics; May 2017; vol. 35 (no. 2); p. 261-271

**Abstract**
Incident heart failure and the burden of hospitalization may be demonstrating a decline. However, as the population ages, the prevalence of heart failure continues to increase. Mortality among heart failure patients is increasingly due to non-cardiovascular causes. Current evidence-based therapy for heart failure has improved heart failure related mortality. Current efforts should be directed toward optimizing evidence based medical and device therapy, reducing morbidity, and increasing quality of life with heart failure. Future clinical trials should focus on therapies for heart failure with preserved ejection fraction, regenerative therapy for heart failure, and optimizing durable mechanical support for end-stage heart failure.


**Authors**
Ramachandran, Sweta; Lowenthal, Alexander; Ritner, Carissa; Lowenthal, Shiri; Bernstein, Harold S

**Source**
PloS one; 2017; vol. 12 (no. 8); p. e0183624

**Abstract**
Incident heart failure and the burden of hospitalization may be demonstrating a decline. However, as the population ages, the prevalence of heart failure continues to increase. Mortality among heart failure patients is increasingly due to non-cardiovascular causes. Current evidence-based therapy for heart failure has improved heart failure related mortality. Current efforts should be directed toward optimizing evidence based medical and device therapy, reducing morbidity, and increasing quality of life with heart failure. Future clinical trials should focus on therapies for heart failure with preserved ejection fraction, regenerative therapy for heart failure, and optimizing durable mechanical support for end-stage heart failure.
Abstract

Biomarkers of heart failure in adults have been extensively studied. However, biomarkers to monitor the progression of heart failure in children with univentricular physiology are less well understood. We proposed that as mediators of diverse pathophysiology, miRNAs contained within circulating microvesicles could serve as biomarkers for the presence and progression of heart failure in univentricular patients. To test this, we studied the association of heart failure with elevations in specific miRNAs isolated from circulating microvesicles in a cohort of children with univentricular heart disease and heart failure. We conducted a single site cross-sectional observational study of 71 children aged 1 month-7 years with univentricular heart disease and heart failure. We demonstrated that levels of miR129-5p isolated from plasma microvesicles were inversely related to the degree of clinical heart failure as assessed by Ross score. We then showed that miR129-5p levels are downregulated in HL1 cells and human embryonic stem cell-derived cardiomyocytes exposed to oxidative stress. We demonstrated that bone morphogenetic protein receptor 2, which has been implicated in the development of pulmonary vascular disease, is a target of miR129-5p, and conversely regulated in response to oxidative stress in cell culture. Levels of miR129-5p were inversely related to the degree of clinical heart failure in patients with univentricular heart disease. This study demonstrates that miR129-5p is a sensitive and specific biomarker for heart failure in univentricular heart disease independent of ventricular morphology or stage of palliation. Further study is warranted to understand the targets affected by miR129-5p with the development of heart failure in patients with univentricular physiology.

4. Burden of Recurrent Hospitalizations Following an Admission for Acute Heart Failure: Preserved Versus Reduced Ejection Fraction.

Authors
Santas, Enrique; Valero, Ernesto; Mollar, Anna; García-Blas, Sergio; Palau, Patricia; Miñana, Gema; Núñez, Eduardo; Sanchis, Juan; Chorro, Francisco Javier; Núñez, Julio

Source
Revista espanola de cardiologia (English ed.); Apr 2017; vol. 70 (no. 4); p. 239-246

Publication Date
Apr 2017

Publication Type(s)
Journal Article Observational Study

 abstract

INTRODUCTION AND OBJECTIVES
Heart failure with preserved ejection fraction and reduced ejection fraction share a high mortality risk. However, differences in the rehospitalization burden over time between these 2 entities remains unclear. METHODS We prospectively included 2013 consecutive patients discharged for acute heart failure. Of these, 1082 (53.7%) had heart failure with preserved ejection fraction and 931 (46.2%) had heart failure with reduced ejection fraction. Cox and negative binomial regression methods were used to evaluate the risks of death and repeat hospitalizations, respectively. RESULTS A median follow-up of 2.36 years (interquartile range: 0.96-4.65), 1018 patients (50.6%) died, and 3804 readmissions were registered in 1406 patients (69.8%). Overall, there were no differences in mortality between heart failure with preserved ejection fraction and heart failure with reduced ejection fraction (16.7 vs 16.1 per 100 person-years, respectively; P=.0794), or all-cause repeat hospitalization rates (62.1 vs 62.2 per 100 person-years, respectively; P=.944). After multivariable adjustment, and compared with patients with heart failure with reduced ejection fraction, patients with heart failure with preserved ejection fraction exhibited a similar risk of all-cause readmissions (incidence rate ratio=1.04; 95%CI, 0.93-1.17; P=.461). Regarding specific causes, heart failure with preserved ejection fraction showed similar risks of cardiovascular and heart failure-related rehospitalizations (incidence rate ratio=0.93; 95%CI, 0.82-1.06; P=.304; incidence rate ratio=0.96; 95% confidence interval, 0.83-1.13; P=.677, respectively), but had a higher risk of noncardiovascular readmissions (incidence rate ratio=1.24; 95%CI, 1.04-1.47; P=.012). CONCLUSIONS Following an admission for acute heart failure, patients with heart failure with preserved ejection fraction have a similar rehospitalization burden to those with heart failure with reduced ejection fraction. However, patients with heart failure with preserved ejection fraction are more likely to be readmitted for noncardiovascular causes.

5. The role of unregulated care providers in managing heart failure patients in long-term care facilities.

Authors
Heckman, George A; Boscart, Veronique M; D'Elia, Teresa; Kaasalainen, Sharon; McAiney, Carrie; Kelley, Mary Lou; Stolee, Paul; Strachan, Patricia; McKelvie, Robert S

Source
Journal of clinical nursing; Mar 2017; vol. 26 (no. 5-6); p. 849-861
AIMS AND OBJECTIVE

Heart failure is a complex syndrome in which abnormal heart function results in clinical symptoms and signs of low cardiac output and/or pulmonary or systemic congestion. Heart failure is common among long-term care residents, and is associated with significant morbidity and acute care utilisation. Heart failure guidelines endorse standard therapies, yet long-term care residents are less likely to receive recommended treatments. The objective of this study is to understand the perceptions and potential role of unregulated care providers in contributing to better heart failure management among long-term care residents.

DESIGN

Focus group interviews.

METHOD

This qualitative study employed focus groups to explore perceptions from 24 unregulated care providers in three Ontario, Canada long-term care homes, about barriers to the optimal management of heart failure.

RESULTS

Three overarching concepts emerged characterising unregulated care providers’ experiences in caring for residents with heart failure in long-term care: (1) the complexity of providing heart failure care in a long-term care setting, (2) striving for resident-centred decision making and (3) unregulated care providers role enactment nested within an interprofessional team in long-term care. These concepts reflect the complex interplay between individual unregulated care providers and residents, and heart failure-related, socio-cultural and organisational factors that influence heart failure care processes in the long-term care system.

CONCLUSION

Optimising the management of heart failure in long-term care is contingent on greater engagement of unregulated care providers as active partners in the interprofessional care team. Interventions to improve heart failure management in long-term care must ensure that appropriate education is provided to all long-term care staff, including unregulated care providers, and in a manner that fosters greater and more effective interprofessional collaboration.

RELEVANCE TO CLINICAL PRACTICE

Active and collaborative engagement unregulated care providers has the potential to improve the management of heart failure in long-term care residents.

6. Heart Failure and Hypertension: Importance of Prevention.

Authors: Pfeffer, Marc A
Source: The Medical clinics of North America; Jan 2017; vol. 101 (no. 1); p. 19-28
Publication Date: Jan 2017
Publication Type(s): Journal Article Review
PubMedID: 27884228
Database: Medline
Abstract: This article discusses the role of hypertension in heart failure. Elevated blood pressure has the greatest population attributable risk for the development of heart failure. The mortality rates following the clinical recognition of heart failure is increased multifold. The treatment of hypertension with antihypertensive agents is particularly effective in preventing heart failure, which makes it the most effective therapy for heart failure.


Authors: Çavuşoğlu, Yüksel; Altay, Hakan; Çetiner, Mustafa; Güvenç, Tolga Sinan; Temizhan, Ahmet; Ural, Dilek; Yeşiibursa, Dilek; Yıldırım, Nesilğül; Yılmaz, Mehmet Birhan
Source: Türk Kardiyojoloji Derneği arşivi : Türk Kardiyojoloji Derneği'nin yayın organıdır; Mar 2017; vol. 45 ; p. 1-38
Publication Date: Mar 2017
Publication Type(s): Journal Article
PubMedID: 28446734
Database: Medline
Abstract: Heart failure is an important community health problem. Prevalence and incidence of heart failure have continued to rise over the years. Despite recent advances in heart failure therapy, prognosis is still poor, rehospitalization rate is very high, and quality of life is worse. Co-morbidities in heart failure have negative impact on clinical course of the disease, further impair prognosis, and add difficulties to treatment of clinical picture. Therefore, successful management of co-morbidities is strongly recommended in addition to conventional therapy for heart failure. One of the most common co-morbidities in heart failure is presence of iron deficiency and anemia. Current evidence suggests that iron deficiency and anemia are more prevalent in patients with heart failure and reduced ejection fraction, as well as those with heart failure and preserved ejection fraction. Moreover, iron deficiency and anemia are referred to as independent predictors for poor prognosis in heart failure. There is strong relationship between iron deficiency or anemia and severity of clinical status of heart failure. Over the last two decades, many clinical investigations have been conducted on clinical effectiveness of treatment of iron deficiency or anemia with oral iron, intravenous iron, and erythropoietin therapies. Studies with oral iron and erythropoietin therapies did not provide any clinical benefit and, in fact, these therapies have been shown to be associated with increase in adverse clinical outcomes. However, clinical trials in patients with iron deficiency in the presence or absence of anemia have demonstrated considerable clinical benefits of intravenous iron therapy, and based on these positive outcomes, iron deficiency has become target of therapy in management of heart failure. The present report assesses current approaches to iron deficiency and anemia in heart failure in light of recent evidence.

8. Left Ventricular global longitudinal strain predicts heart failure readmission in acute decompensated heart failure.
9. Mitochondrial Function in Non-ischemic Heart Failure.

Authors: Gupte, Anisha A; Hamilton, Dale J

Source: Advances in experimental medicine and biology; 2017; vol. 982; p. 113-126

Abstract: Provision for the continuous demand for energy from the beating heart relies heavily on efficient mitochondrial activity. Non-ischemic cardiomyopathy in which oxygen supply is not limiting results from etiologies such as pressure overload. It is associated with progressive development of metabolic stress culminating in energy depletion and heart failure. The mitochondria from the ventricular walls undergoing non-ischemic cardiomyopathy are subjected to long periods of adaptation to support the changing metabolic milieu, which has been described as mal-adaptation since it ultimately results in loss of cardiac contractile function. While the chronicity of exposure to metabolic stressors, co-morbidities and thereby adaptive changes in mitochondria maybe different between ischemic and non-ischemic heart failure, the resulting pathology is very similar, especially in late stage heart failure. Understanding of the mitochondrial changes in early-stage heart failure may guide the development of mitochondrial-targeted therapeutic options to prevent progression of non-ischemic heart failure. This chapter reviews findings of mitochondrial functional changes in animal models and humans with non-ischemic heart failure. While most animal models of non-ischemic heart failure exhibit cardiac mitochondrial dysfunction, studies in humans have been inconsistent despite confirmed reduction in ATP production. This chapter also reviews the possibility of impairment of substrate supply processes upstream of the mitochondria in heart failure, and discusses potential metabolism-targeted therapeutic options.
Heart failure (HF) is one of the leading causes of hospitalizations for elderly adults in the United States. One in 5 Americans will be >65 years of age by 2050. Because of the high prevalence of HF in this group, the number of Americans requiring hospitalization for this disorder is expected to rise significantly. We reviewed the most recent and ongoing studies and recommendations for the management of patients hospitalized due to decompensated HF. The Acute Decompensated Heart Failure National Registry, together with the 2013 American College of Cardiology Foundation and American Heart Association heart failure guidelines, earlier retrospective and prospective studies including the Diuretic Optimization Strategies Evaluation (DOSE), the Trial of Intensified vs Standard Medical Therapy in the Elderly Patients With Congestive Heart Failure (TIME-CHF), the Organized Program to Initiate Lifesaving Treatment in Hospitalized Patients with Heart Failure (OPTIMIZE-HF), the Rapid Emergency Department Heart Failure Outpatient Trial (REDHOT) and the Comparison of Medical, Pacing and Defibrillation Therapies in Heart Failure (COMPANION) trial were reviewed for current practices pertaining to these patients. Gaps in our knowledge of optimal use of patient-specific information (biomarkers and comorbid conditions) still exist.

The purpose of this study was to evaluate risk factors for failure of antibiotic treatment within 30 days for uncomplicated skin infections of outpatients treated in a Veterans Affairs hospital. A retrospective chart review of outpatients between January 2006 and July 2015 with an ICD-9 (International Statistical Classification of Diseases and Related Health Problems) code of cellulitis or abscess was included in the analysis. The primary outcome was success versus failure of the antibiotic, with failure defined as another antibiotic prescribed or hospitalization within 30 days for the original indication. A total of 293 patients were included in the final analysis, 24% of whom failed within 30 days. Obesity/overweight (body mass index [BMI] of >25 kg/m2) was identified in 83% of the overall population, with 16% of that population having a BMI greater than 40 kg/m2. An elevated BMI of 34.2 kg/m2 (P = 0.0098) was found in the subset of patients who failed oral antibiotics compared to a BMI of 31.32 kg/m2 in patients who were treated successfully. Additionally, the patients who failed had an increased prevalence of heart failure at 16% (P = 0.027). Using multivariate logistic regression, BMI and heart failure were determined to be significant predictors of antibiotic prescription failure. Each 10-kg/m2 unit increase in BMI was associated with a 1.62-fold greater odds of failure. A diagnosis of heart failure increased the odds of failure by 2.6-fold (range, 1.1- to 5.8-fold). Outpatients with uncomplicated skin infections with an elevated BMI and heart failure were found to have increased odds of failure, defined as hospitalization or additional antibiotics within 30 days.

#### 11. Hospital Management of Acute Decompensated Heart Failure.

**Authors** Abdo, Ashraf S  
**Source** The American journal of the medical sciences; Mar 2017; vol. 353 (no. 3): p. 265-274  
**PubMedID** 28069657  
**Database** Medline

**Abstract** Diabetes mellitus increases the mortality secondary to heart failure independent of hypertension and coronary artery disease. Several hypoglycemic agents are used to achieve glycemic control, of which several classes however still raise controversies in terms of safety in patients with concomitant heart failure: Metformin does not carry an increased risk of exacerbation in patients with stable heart failure, yet should be avoided in patients with unstable disease or chronic kidney disease. Sulfonylureas are neither associated with an increased mortality, nor do they seem to have deleterious effects on heart failure. Thiazolidinediones are relatively contraindicated in patients with New York Heart Association class III or IV disease secondary to concerns of fluid retention and heart failure exacerbation. Glucagon-like peptide 1 agonists have shown trends towards improvement of heart failure parameters. Dipeptidylpeptidase 4 inhibitors show an overall neutral outcome, although saxagliptin can possibly be associated with an increased risk of hospitalization for heart failure. The use of sodium-glucose co-transporter 2 inhibitors is associated with beneficial cardiovascular outcomes, and further studies are underway.

#### 12. Obesity and Heart Failure as Predictors of Failure in Outpatient Skin and Soft Tissue Infections.

**Authors** Conway, Erin L; Sellick, John A; Kurtzhalts, Kari; Mergenhagen, Kari A  
**Source** Antimicrobial agents and chemotherapy; Mar 2017; vol. 61 (no. 3)  
**PubMedID** 28069657  
**Database** Medline

**Abstract** Obesity and Heart Failure as Predictors of Failure in Outpatient Skin and Soft Tissue Infections.

**Authors** Motiejeunaite, J; Chouihed, T; Mebazaa, A  
**Source** Clinical pharmacology and therapeutics; Aug 2017; vol. 102 (no. 2): p. 180-182

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**HDAS Export**

**18 Oct 17 - 10:28**
In their article "Role and Value of Clinical Pharmacy in Heart Failure Management" Stough and Patterson discuss the potential benefits that clinical pharmacists could bring to heart failure management. They mostly focused on chronic stable heart failure. The objective of this commentary is to provide future perspectives for clinical pharmacist involvement in multidisciplinary heart failure team in the management of patients admitted in emergency for decompensation of their heart condition.

**14. Epidemiology, Pathophysiology, and Prognosis of Heart Failure in Older Adults.**

**Authors** Dharmarajan, Kumar; Rich, Michael W

**Source** Heart failure clinics; Jul 2017; vol. 13 (no. 3); p. 417-426

Heart failure is the quintessential cardiovascular syndrome of aging that results from common cardiovascular conditions in older adults in conjunction with age-associated changes in cardiovascular structure and function. To a large extent, heart failure is a geriatric syndrome in much the same way that dementia, falls, and frailty are geriatric syndromes. The incidence and prevalence of heart failure increase strikingly with age and make heart failure the most common reason for hospitalization among older adults. Although outcomes for older adults with heart failure have improved over time, mortality, hospitalization, and rehospitalization rates remain high.

**15. Perspective on precision medicine in paediatric heart failure.**

**Authors** Fridman, Michael D; Mital, Seema

**Source** Clinical science (London, England : 1979); Mar 2017; vol. 131 (no. 6); p. 439-448

In 2015, President Obama launched the Precision Medicine Initiative (PMI), which introduced new funding to a method of research with the potential to study rare and complex diseases. Paediatric heart failure, a heterogeneous syndrome affecting approximately 1 in 100000 children, is one such condition in which precision medicine techniques may be applied with great benefit. Current heart failure therapies target downstream effects of heart failure rather than the underlying cause of heart failure. As such, they are often ineffective in paediatric heart failure, which is typically of primary (e.g. genetic) rather than secondary (e.g. acquired) aetiology. It is, therefore, important to develop therapies that can target the causes of heart failure in children with greater specificity thereby decreasing morbidity, mortality and burden of illness on both patients and their families. The benefits of co-ordinated research in genomics, proteomics, metabolomics, transcriptomics and phenomics along with dietary, lifestyle and social factors have led to novel therapeutic and prognostic applications in other fields such as oncology. Applying such co-ordinated research efforts to heart failure constitutes an important step in advancing care and improving the lives of those affected.

**16. Selection of reference genes for gene expression studies in heart failure for left and right ventricles.**

**Authors** Li, Mengmeng; Rao, Man; Chen, Kai; Zhou, Jianye; Song, Jiangping

**Source** Gene; Jul 2017; vol. 620 ; p. 30-35

In 2015, President Obama launched the Precision Medicine Initiative (PMI), which introduced new funding to a method of research with the potential to study rare and complex diseases. Paediatric heart failure, a heterogeneous syndrome affecting approximately 1 in 100000 children, is one such condition in which precision medicine techniques may be applied with great benefit. Current heart failure therapies target downstream effects of heart failure rather than the underlying cause of heart failure. As such, they are often ineffective in paediatric heart failure, which is typically of primary (e.g. genetic) rather than secondary (e.g. acquired) aetiology. It is, therefore, important to develop therapies that can target the causes of heart failure in children with greater specificity thereby decreasing morbidity, mortality and burden of illness on both patients and their families. The benefits of co-ordinated research in genomics, proteomics, metabolomics, transcriptomics and phenomics along with dietary, lifestyle and social factors have led to novel therapeutic and prognostic applications in other fields such as oncology. Applying such co-ordinated research efforts to heart failure constitutes an important step in advancing care and improving the lives of those affected.
17. Risk of heart failure after community acquired pneumonia: prospective controlled study with 10 years of follow-up.

Authors: Eurich, Dean T; Marrie, Thomas J; Minhas-Sandhu, Jasjeet K; Majumdar, Sumit R
Source: BMJ (Clinical research ed.); Feb 2017; vol. 356; p. j413
Publication Date: Feb 2017
Publication Type(s): Journal Article
PubMedID: 28193610
Database: Medline
Abstract: Objective: To determine the attributable risk of community acquired pneumonia on incidence of heart failure throughout the age range of affected patients and severity of the infection. Design: Cohort study. Setting: Six hospitals and seven emergency departments in Edmonton, Alberta, Canada, 2000-02. Participants: 4988 adults with community acquired pneumonia and no history of heart failure were prospectively recruited and matched on age, sex, and setting of treatment (inpatient or outpatient). With up to five adults without pneumonia (controls) or prevalent heart failure (n=23,060). Main outcome measures: Risk of hospital admission for incident heart failure or a combined endpoint of heart failure or death up to 2012, evaluated using multivariable Cox proportional hazards analyses. Results: The average age of participants was 55 years, 2649 (53.1%) were men, and 63.4% were managed as outpatients. Over a median of 9.9 years (interquartile range 5.9-10.6), 11.9% (n=592) of patients with pneumonia had incident heart failure compared with 7.4% (n=1712) of controls (adjusted hazard ratio 1.55, 95% confidence interval 1.36 to 1.77). Results were consistent in the short term (90 days) and intermediate term (one year) and whether patients were treated in hospital or as outpatients. Conclusion: Our results show that community acquired pneumonia substantially increases the risk of heart failure across the age and severity range of cases. This should be considered when formulating post-discharge care plans and preventive strategies, and assessing downstream episodes of dyspnoea.

18. Diabetes Mellitus and Heart Failure.

Authors: Lehrke, Michael; Marx, Nikolaus
Source: The American journal of medicine; Jun 2017; vol. 130 (no. 6S); p. S40
Publication Date: Jun 2017
Publication Type(s): Journal Article Review
PubMedID: 28526183
Database: Medline
Abstract: Epidemiologic and clinical data from the last 2 decades have shown that the prevalence of heart failure in diabetes is very high, and the prognosis for patients with heart failure is worse in those with diabetes than in those without diabetes. Experimental data suggest that various mechanisms contribute to the impairment in systolic and diastolic function in patients with diabetes, and there is an increased recognition that these patients develop heart failure independent of the presence of coronary artery disease or its associated risk factors. In addition, current clinical data demonstrated that treatment with the sodium glucose cotransporter 2 inhibitor empagliflozin reduced hospitalization for heart failure in patients with type 2 diabetes mellitus and high cardiovascular risk. This review article summarizes recent data on the prevalence, prognosis, pathophysiology, and therapeutic strategies to treat patients with diabetes and heart failure.

19. Clinical Correlates and Prognostic Value of Proenkephalin in Acute and Chronic Heart Failure.

Knowledge is known to affect self-care behaviors. However, little is known about the factors that influence self-care behaviors among patients with heart failure in Jordan. A cross-sectional descriptive-correlational design was used to describe the associations between knowledge, sociodemographics, and self-care behaviors. In a convenience sample of 226 patients with heart failure, the Dutch Heart Failure Scale and Self-Care of Heart Failure Index (SCHFI) version 6.2 were used to measure knowledge and self-care behaviors, respectively. The mean heart failure knowledge score was quite low at 5.29. The SCHFI self-care management subscale mean was 57.56 with an actual range of 10-90, and the SCHFI self-care maintenance subscale mean was 53.89 with an actual range of 13.33-86.66. The SCHFI self-care confidence subscale mean was lowest of the three at 45.07, with an actual range of 5.56-94.52. All three subscale mean scores were below the clinical target level (≥70) for the SCHFI. Lower knowledge, income, and educational level, shorter duration of disease, fewer people living at home, older age, and being unemployed were significant predictors of low self-care scores. Characteristics of the cultural, social, and healthcare environment in Jordan may help explain some results. Nurses may play a role in improving knowledge and self-care among patients with heart failure in Jordan. Studies of the effect of educational programs on knowledge and self-care among patients with heart failure are recommended.

21. Role of Inflammation in Heart Failure.

Shirazi, Lily F; Bissett, Joe; Romeo, Francesco; Mehta, Jawahar L
Abstract

PURPOSE OF REVIEW
This paper aims to discuss the interactions between inflammatory cytokines, immune cells, and heart failure (HF). The association of heart failure with inflammation has led to multiple studies on anti-inflammatory agents in acute and chronic heart failure.

RECENT FINDINGS
Recent findings have implicated leukocytes subclasses and multiple inflammatory mediators in the progression of heart failure and cardiovascular disease. Studies have discovered further details on the interaction between immune cells—particularly macrophages and lymphocytes—and inflammation. There are both cell-mediated and cytokine-mediated pathways of inflammation, which are interconnected. Additionally, a number of markers have been used and studied in heart failure disease progression. In this review, we discuss inflammatory biomarkers and immune cell mediators involved in HF. We will focus on the correlations and role of these inflammatory mediators in the genesis of HF. We will also discuss the evidence on beneficial effects of anti-inflammatory agents in the setting of chronic HF.

22. Heart failure after conventional metal-on-metal hip replacements.

Authors
Gillam, Marianne H; Pratt, Nicole L; Inacio, Maria C S; Roughhead, Elizabeth E; Shakib, Sepehr; Nicholls, Stephen J; Graves, Stephen E

Source
Acta orthopaedica; Feb 2017; vol. 88 (no. 1); p. 2-9

Publication Date
Feb 2017

Publication Type(s)
Multicenter Study Journal Article

PubMedID
27759468

Database
Available at Acta orthopaedica from Europe PubMed Central - Open Access Available at Acta orthopaedica from EBSCO (CINAHL with Full Text)

Abstract
Background and purpose - It is unclear whether metal particles and ions produced by mechanical wear and corrosion of hip prostheses with metal-on-metal (MoM) bearings have systemic adverse effects on health. We compared the risk of heart failure in patients with conventional MoM total hip arthroplasty (THA) and in those with metal-on-polyethylene (MoP) THA. Patients and methods - We conducted a retrospective cohort study using data from the Australian Government Department of Veterans' Affairs health claims database on patients who received conventional THA for osteoarthritis between 2004 and 2012. The MoM THAs were classified into groups: Articular Surface Replacement (ASR) XL Acetabular System, other large-head (LH) (> 32 mm) MoM, and small-head (SH) (≤ 32 mm) MoM. The primary outcome was hospitalization for heart failure after THA. Results - 4,019 patients with no history of heart failure were included (56% women). Men with an ASR XL THA had a higher rate of hospitalization for heart failure than men with MoP THA (hazard ratio (HR) = 3.2, 95% CI: 1.6-6.5). No statistically significant difference in the rate of heart failure was found with the other LH MoM or SH MoM compared to MoP in men. There was no statistically significant difference in heart failure rate between exposure groups in women. Interpretation - An association between ASR XL and hospitalization for heart failure was found in men. While causality between ASR XL and heart failure could not be established in this study, it highlights an urgent need for further studies to investigate the possibility of systemic effects associated with MoM THA.

23. Age-Specific Trends in Incidence, Mortality, and Comorbidities of Heart Failure in Denmark, 1995 to 2012.

Authors
Christiansen, Mia N; Køber, Lars; Weeke, Peter; Vasan, Ramachandran S; Jeppesen, Jørgen L; Smith, J Gustav; Gislason, Gunnar H; Torp-Pedersen, Christian; Andersson, Charlotte

Source
Circulation; Mar 2017; vol. 135 (no. 13); p. 1214-1223

Publication Date
Mar 2017

Publication Type(s)
Historical Article Journal Article

PubMedID
28174193

Database
Medline
Abstract

BACKGROUND: The cumulative burden and importance of cardiovascular risk factors have changed over the past decades. Specifically, obesity rates have increased among younger people, whereas cardiovascular health has improved in the elderly. Little is known regarding how these changes have impacted the incidence and mortality rates of heart failure. Therefore, we aimed to investigate the age-specific trends in the incidence and 1-year mortality rates following a first-time diagnosis of heart failure in Denmark between 1995 and 2012.

METHODS: We included all Danish individuals >18 years of age with a first-time in-hospital diagnosis of heart failure. Data were collected from 3 nationwide Danish registries. Annual incidence rates of heart failure and 1-year standardized mortality rates were calculated under the assumption of a Poisson distribution.

RESULTS: We identified 210,430 individuals with a first-time diagnosis of heart failure between 1995 and 2012; the annual incidence rates per 10,000 person-years declined among older individuals (rates in 1995 versus 2012: 164 versus 115 in individuals >74 years, 63 versus 35 in individuals 65-74 years, and 20 versus 17 in individuals 55-64 years; \( P<0.0001 \) for all) but increased among the younger (0.4 versus 0.7 in individuals 18-34 years, 1.3 versus 2.0 in individuals 35-44 years, and 5.0 versus 6.4 in individuals 45-54 years; \( P<0.0001 \) for all). The proportion of patients with incident heart failure ≤50 years of age doubled from 3% in 1995 to 6% in 2012 (\( P<0.0001 \)). Sex- and age-adjusted incidence rate ratios for 2012 versus 1996 were 0.69 (95% confidence interval, 0.67-0.71; \( P<0.0001 \)) among people >50 years of age, and 1.52 (95% confidence interval, 1.33-1.73; \( P<0.0001 \)) among individuals ≤50 years of age; it remained essentially unchanged on additional adjustment for diabetes mellitus, ischemic heart disease, and hypertension. Standardized 1-year mortality rates declined for middle-aged patients with heart failure but remained constant for younger (<45 years) and elderly (≥65 years) patients. The prevalence of comorbidities (including diabetes mellitus, hypertension, and atrial fibrillation) increased, especially in younger patients with heart failure.

CONCLUSIONS: Over the past 2 decades, the incidence of heart failure in Denmark declined among older individuals (>50 years), but increased among younger (≤50 years) individuals. These observations may portend a rising burden of heart failure in the community.

24. The diagnostic value of plasma N-terminal connective tissue growth factor levels in children with heart failure.

Authors: Li, Gang; Song, Xueqing; Xia, Jiyi; Li, Jing; Jia, Peng; Chen, Pengyuan; Zhao, Jian; Liu, Bin
Source: Cardiology in the young; Jan 2017; vol. 27 (no. 1); p. 101-108
PubMedID: 26979242
Database: Medline

Abstract

OBJECTIVE: The aim of this study was to assess the diagnostic value of plasma N-terminal connective tissue growth factor in children with heart failure. Methods and results: Plasma N-terminal connective tissue growth factor was determined in 61 children, including 41 children with heart failure, 20 children without heart failure, and 30 healthy volunteers. The correlations between plasma N-terminal connective tissue growth factor levels and clinical parameters were investigated. Moreover, the diagnostic value of N-terminal connective tissue growth factor levels was evaluated. Compared with healthy volunteers and children without heart failure, plasma N-terminal connective tissue growth factor levels were significantly elevated in those with heart failure (\( p<0.05 \)), but it obviously improved the ability of diagnosing heart failure in children, as demonstrated by the integrated discrimination improvement (6.2%, \( p=0.013 \)) and net re-classification improvement (13.2%, \( p=0.017 \)) indices. CONCLUSIONS: Plasma N-terminal connective tissue growth factor is a promising diagnostic biomarker for heart failure in children.

25. Risk of Stroke in Patients With Heart Failure: A Population-Based 30-Year Cohort Study.

Authors: Adelborg, Kasper; Szépligeti, Szimonetta; Sundbøll, Jens; Horváth-Puhó, Erzsébet; Henderson, Victor W; Ording, Anne; Pedersen, Lars; Sørensen, Henrik Toft
Source: Stroke; May 2017; vol. 48 (no. 5); p. 1161-1168
PubMedID: 28377383
Database: Medline

Abstract

OBJECTIVE: The aim of this study was to assess the diagnostic value of plasma N-terminal connective tissue growth factor in children with heart failure. Methods and results: Plasma N-terminal connective tissue growth factor was determined in 61 children, including 41 children with heart failure, 20 children without heart failure, and 30 healthy volunteers. The correlations between plasma N-terminal connective tissue growth factor levels and clinical parameters were investigated. Moreover, the diagnostic value of N-terminal connective tissue growth factor levels was evaluated. Compared with healthy volunteers and children without heart failure, plasma N-terminal connective tissue growth factor levels were significantly elevated in those with heart failure (\( p<0.05 \)), but it obviously improved the ability of diagnosing heart failure in children, as demonstrated by the integrated discrimination improvement (6.2%, \( p=0.013 \)) and net re-classification improvement (13.2%, \( p=0.017 \)) indices. CONCLUSIONS: Plasma N-terminal connective tissue growth factor is a promising diagnostic biomarker for heart failure in children.
BACKGROUND AND PURPOSE: The long-term risk of specific stroke subtypes among heart failure patients is largely unknown. We examined short-term and long-term risk of ischemic stroke, intracerebral hemorrhage (ICH), and subarachnoid hemorrhage (SAH) in heart failure patients and in a general population comparison cohort. METHODS: In this nationwide cohort study (1980-2012), we used Danish population-based medical registries to identify and follow (1) all patients hospitalized for the first time with heart failure and (2) a birth year-, sex-, and calendar year-matched general population comparison cohort. Age-, sex-, and comorbidity-adjusted stroke rate ratios were computed based on Cox regression analysis. RESULTS: We included 289,353 patients with heart failure and 1,446,765 individuals from the general population in the analysis. One- and 5-year risks among heart failure patients were 1.4% and 3.9% for ischemic stroke, 0.2% and 0.5% for ICH, and 0.03% and 0.07% for SAH. The 30-day adjusted stroke rate ratio was increased markedly for ischemic stroke (5.08; 95% confidence interval, 4.58-5.63) and was also elevated for ICH (2.13; 95% confidence interval, 1.53-2.97) and SAH (3.52; 95% confidence interval, 1.54-8.08). Between 31 days and 30 years, risk of all stroke subtypes remained positively associated with heart failure (1.5- to 2.1-fold for ischemic stroke, 1.4- to 1.8-fold for ICH, and 1.1- to 1.7-fold for SAH) in comparison with the general population cohort. CONCLUSIONS: Heart failure was associated with increased short-term and long-term risk of all stroke subtypes, suggesting that heart failure is a potent and persistent risk factor for ischemic stroke, ICH, and SAH.

26. Weight Loss and Heart Failure: A Nationwide Study of Gastric Bypass Surgery Versus Intensive Lifestyle Treatment.

Authors: Sundström, Johan; Bruze, Gustaf; Ottosson, Johan; Marcus, Claude; Näslund, Ingmar; Neovius, Martin
Source: Circulation; Apr 2017; vol. 135 (no. 17); p. 1577-1585
PubMed ID: 28258170
Database: Medline

BACKGROUND: Associations of obesity with incidence of heart failure have been observed, but the causality is uncertain. We hypothesized that gastric bypass surgery leads to a lower incidence of heart failure compared with intensive lifestyle modification in obese people. METHODS: We included obese people without previous heart failure from a Swedish nationwide registry of people treated with a structured intensive lifestyle program and the Scandinavian Obesity Surgery Registry. All analyses used inverse probability weights based on baseline body mass index and a propensity score estimated from baseline variables. Treatment groups were well balanced in terms of weight, body mass index, and most potential confounders. Associations of treatment with heart failure incidence, as defined in the National Patient Register, were analyzed with Cox regression. RESULTS: The 25,804 gastric bypass surgery patients had on average lost 18.8 kg more weight after 1 year and 22.6 kg more after 2 years than the 13,701 lifestyle modification patients. During a median of 4.1 years, surgery patients had lower heart failure incidence than lifestyle modification patients (hazard ratio, 0.54; 95% confidence interval, 0.36-0.82). A 10-kg achieved weight loss after 1 year was related to a hazard ratio for heart failure of 0.77 (95% confidence interval, 0.60-0.97) in both treatment groups combined. Results were robust in sensitivity analyses. CONCLUSIONS: Gastric bypass surgery was associated with approximately one half the incidence of heart failure compared with intensive lifestyle modification in this study of 2 large nationwide registries. We also observed a graded association between increasing weight loss and decreasing risk of heart failure.

27. Improving quality of life and decreasing readmissions in heart failure patients in a multidisciplinary transition-to-care clinic.

Authors: Whitaker-Brown, Charlene D; Woods, Stephanie J; Cornelius, Judith B; Southard, Erik; Gulati, Sanjeev K
Source: Heart & lung: the journal of critical care; 2017; vol. 46 (no. 2); p. 79-84

OBJECTIVES: The purpose was to pilot the feasibility and impact of a 4-week transition-to-care program on quality of life for heart failure patients. METHODS: The transition from the acute care to the outpatient setting has been shown to be a critical time with heart failure patients. METHODS: A pre- and post-test design was used. Quality of Life, measured by the Minnesota Living with Heart Failure Questionnaire, and hospital readmissions were the outcomes. A convenience sample of 50 persons was recruited into a multidisciplinary transition-to-care program for heart failure patients following hospitalization. Thirty-six (72%) completed the study. RESULTS: There was a significant improvement in quality of life. Men reported greater improvement in physical symptoms and less emotional distress when compared to women. Only 2 participants were readmitted within 30 days. CONCLUSIONS: Study findings support improved quality of life and decreased readmission rates following a multidisciplinary transition-to-care program for heart failure patients.

28. Cardiac rehabilitation for women with breast cancer and treatment-related heart failure compared with coronary artery disease: A retrospective study.

Authors: Bonsignore, Alis; Marzolini, Susan; Oh, Paul
### Objective
To examine clinical outcomes and completion rates of cardiac rehabilitation in women with breast cancer and treatment-related heart failure.

### Methods
Data for women with breast cancer and treatment-related heart failure were compared with those for age-matched women with coronary artery disease. Retrospective data were obtained from the Toronto Rehabilitation Institute database for dates between 1998 and 2011, for cardiopulmonary exercise test results at baseline and 6 months, body composition measures, and cardiac rehabilitation completion rates.

### Results
A total of 29 women with breast cancer and treatment-related heart failure (mean 57 years (standard deviation (SD) 9.4)) and 29 age-matched women with coronary artery disease were identified. There was no significant difference between the proportion of women with breast cancer and treatment-related heart failure and those with coronary artery disease who completed the programme. Peak aerobic power (VO2peak) increased in the breast cancer and treatment-related heart failure group (mean 16.2 ml·kg⁻¹·min⁻¹ (SD 3.4) to mean 18.5 ml·kg⁻¹·min⁻¹ (SD 4.5); p = 0.002) and in the coronary artery disease group (mean 18.9 ml·kg⁻¹·min⁻¹ (SD 4.5) to mean 20.8 ml·kg⁻¹·min⁻¹ (SD 4.9); p = 0.01). Body fat percentage increased in the breast cancer and treatment-related heart failure group (mean 34.8% (SD 8.5) to mean 36.3% (SD 6.9); p = 0.04).

### Conclusion
Women with breast cancer and treatment-related heart failure participating in cardiac rehabilitation demonstrate similar significant gains in VO2peak and similar completion rates to those of age-matched women with coronary artery disease. Further research is needed to determine interventions that improve body composition in women with breast cancer and treatment-related heart failure.

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**Abstract**

The final therapy of 'end-stage heart failure' is orthotopic heart, lung or heart-lung transplantation. However, these options are not available for many patients worldwide. Therefore, novel therapeutic strategies are needed. Based on pathophysiological insights regarding (1) the long-term impact of an obstructive pulmonary outflow tract in neonates with congenitally corrected transposition of the great arteries, (2) the importance of a restrictive versus a non-restrictive atrial septum in neonates born with a borderline left ventricle and (3) the significance of both, a patent foramen ovale and/or open ductus arteriosus for survival of newborns with persistent pulmonary hypertension, the current review introduces some therapeutic strategies that may be applicable to selected patients with heart failure. These strategies include (1) reversible pulmonary artery banding in left ventricular-dilated cardiomyopathy with preserved right ventricular function, (2) the creation of restrictive interatrial communication to treat diastolic (systolic) heart failure, (3) atrioseptostomy or reverse Potts shunt in pulmonary arterial hypertension and (4) return to a fetal, parallel circulation by combining atrioseptostomy and reversed Potts shunt with or without placement of a bilateral pulmonary artery banding. While still being experimental, it is hoped that the procedures presented in the current overview will inspire future novel therapeutic strategies that may be applicable to selected patients with heart failure.

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**Abstract**

The role of neuropeptides in adverse myocardial remodeling and heart failure.

**Authors**
Widiapradja, Alexander; Chunduri, Prasad; Levick, Scott P

**Source**
Cellular and molecular life sciences: CMLS; Jun 2017; vol. 74 (no. 11); p. 2019-2038
Abstract

In addition to traditional neurotransmitters of the sympathetic and parasympathetic nervous systems, the heart also contains numerous neuropeptides. These neuropeptides not only modulate the effects of neurotransmitters, but also have independent effects on cardiac function. While in most cases the physiological actions of these neuropeptides are well defined, their contributions to cardiac pathology are less appreciated. Some neuropeptides are cardioprotective, some promote adverse cardiac remodeling and heart failure, and in the case of others their functions are unclear. Some have both cardioprotective and adverse effects depending on the specific cardiac pathology and progression of that pathology. In this review, we briefly describe the actions of several neuropeptides on normal cardiac physiology, before describing in more detail their role in adverse cardiac remodeling and heart failure. It is our goal to bring more focus toward understanding the contribution of neuropeptides to the pathogenesis of heart failure, and to consider them as potential therapeutic targets.

31. Physical Functioning, Physical Activity, Exercise Self-Efficacy, and Quality of Life Among Individuals With Chronic Heart Failure in Korea: A Cross-Sectional Descriptive Study.

Authors: Lee, Haejung; Boo, Sunjoo; Yu, Jihyoung; Suh, Soon-Rim; Chun, Kook Jin; Kim, Jong Hyun

Source: The journal of nursing research : JNR; Apr 2017; vol. 25 (no. 2); p. 131-139

Publication Date: Apr 2017

Publication Type(s): Journal Article

PubMedID: 28277393

Database: Medline

Abstract: BACKGROUND Both the beneficial relationship between exercise and quality of life and the important role played by exercise self-efficacy in maintaining an exercise regimen among individuals with chronic heart failure are well known. However, most nursing interventions for Korean patients with chronic heart failure focus only on providing education related to risk factors and symptoms. Little information is available regarding the influence of physical functions, physical activity, and exercise self-efficacy on quality of life. PURPOSE This study was conducted to examine the impact of physical functioning, physical activity, and exercise self-efficacy on quality of life among individuals with chronic heart failure. METHOD This study used a cross-sectional descriptive design. Data were collected from 116 outpatients with chronic heart failure in Korea. Left ventricular ejection fraction and New York Heart Association classifications were chart reviewed. Information pertaining to levels of physical activity, exercise self-efficacy, and quality of life were collected using self-administered questionnaires. Data were analyzed using descriptive statistics, t tests, analyses of variance, correlations, and hierarchical multiple regressions. RESULTS About 60% of participants were physically inactive, and most showed relatively low exercise self-efficacy. The mean quality-of-life score was 80.09. The significant correlates for quality of life were poverty, functional status, physical inactivity, and exercise self-efficacy. Collectively, these four variables accounted for 50% of the observed total variance in quality of life.

CONCLUSIONS/IMPLICATIONS FOR PRACTICE Approaches that focus on enhancing exercise self-efficacy may improve patient-centered outcomes in those with chronic heart failure. In light of the low level of exercise self-efficacy reported and the demonstrated ability of this factor to predict quality of life, the development of effective strategies to enhance exercise self-efficacy offers a novel and effective approach to improving the quality of life of patients with chronic heart failure. Nurses should be proactive in advising patients with chronic heart failure to be more physically active and to enhance their self-confidence in diverse ways.

32. Sex-specific mortality differences in heart failure patients with ischemia receiving cardiac resynchronization therapy.

Authors: Han, Zhonglin; Chen, Zheng; Lan, Rongfang; Di, Wencheng; Li, Xiaohong; Yu, Hongsong; Ji, Wenqing; Zhang, Xinlin; Xu, Biao; Xu, Wei

Source: PloS one; 2017; vol. 12 (no. 7); p. e0180513

Publication Date: 2017

Publication Type(s): Journal Article

PubMedID: 28683134

Database: Medline

Available at PloS one from Public Library of Science (PloS)
Available at PloS one from Europe PubMed Central - Open Access
BACKGROUND
Recent studies have reported prognosis differences between male and female heart failure patients following cardiac resynchronization therapy (CRT). However, the potential clinical factors that underpin these differences remain to be elucidated.

METHODS
A meta-analysis was performed to investigate the factors that characterize sex-specific differences following CRT. This analysis involved searching the Medline (Pubmed source) and Embase databases in the period from January 1980 to September 2016.

RESULTS
Fifty-eight studies involving 33445 patients (23.08% of whom were women) were analyzed as part of this study. Only patients receiving CRT with follow-up greater than six months were included in our analysis. Compared with males, females exhibited a reduction of 33% (hazard ratio, 0.67; 95% confidence interval, 0.62-0.73; P = 0.0001) and 42% (hazard ratio, 0.58; 95% confidence interval, 0.46-0.74; P = 0.003) in all-cause mortality and heart failure hospitalization or heart failure, respectively. Following a stratified analysis of all-cause mortality, we observed that ischemic causes (p = 0.03) were likely to account for most of the sex-specific differences in relation to CRT.

CONCLUSION
These data suggest that women have a reduced risk of all-cause mortality and heart failure hospitalization or heart failure following CRT. Based on the results from the stratified analysis, we observed more optimal outcomes for females with ischemic heart disease. Thus, ischemia are likely to play a role in sex-related differences associated with CRT in heart failure patients. Further studies are required to determine other indications and the potential mechanisms that might be associated with sex-specific CRT outcomes.

33. Heart Failure Due to Reduced Ejection Fraction: Medical Management.
Authors: Chavey, William E; Hogikyan, Robert V; Van Harrison, R; Nicklas, John M
Source: American family physician; Jan 2017; vol. 95 (no. 1); p. 13-20
Abstract: Heart failure is an increasingly common condition resulting in high rates of morbidity and mortality. For patients who have heart failure and reduced ejection fraction, randomized clinical trials demonstrate consistent mortality benefit from angiotensin-converting enzyme inhibitors, angiotensin receptor blockers, direct-acting vasodilators, beta blockers, and aldosterone antagonists. Additionally, some data show benefits from two new classes of drugs: angiotensin receptor blocker/neprilysin inhibitor and sinus node modulator. Diuretics and digoxin can be used as needed for symptom control. Statins are not recommended solely for treatment of heart failure. Implantable cardioverter-defibrillators and biventricular pacemakers improve mortality and function in selected patients. For patients who have been hospitalized for heart failure, disease management programs and telemonitoring can reduce hospitalizations and mortality.

34. Role and Value of Clinical Pharmacy in Heart Failure Management.
Authors: Stough, W G; Patterson, J H
Source: Clinical pharmacology and therapeutics; Aug 2017; vol. 102 (no. 2); p. 209-212
Abstract: Effectively managing heart failure requires a multidisciplinary, holistic approach attuned to many factors: diagnosis of structural and functional cardiac abnormalities; medication, device, or surgical management; concomitant treatment of comorbidities; physical rehabilitation; dietary considerations; and social factors. This practice paper highlights the pharmacist’s role in the management of patients with heart failure, the evidence supporting their functions, and steps to ensure the pharmacist resource is available to the broad population of patients with heart failure.

35. Outpatient Emergencies: Acute Heart Failure.
Authors: Mysliwiec, Malgorzata; Bonita, Raphael E
Source: The Medical clinics of North America; May 2017; vol. 101 (no. 3); p. 507-519
Abstract: Heart failure is an epidemic in the United States and a major health problem worldwide. The syndrome of acute heart failure is marked by a recent onset of symptoms usually in terms of days to a few weeks of worsening fatigue, shortness of breath, orthopnea, swelling, and sudden onset of weight gain. Physicians caring for patients with heart failure must know the risk factors for this disease, pathophysiology, symptomatology, important examination findings, key diagnostic tests, and management approach so as to improve symptoms and reduce mortality.
36. Heart failure complicating with SAPHO syndrome.

Authors: Nishimura, Takeshi; Kikuta, Shota; Ishihara, Satoshi; Nakayama, Shinichi

Source: BMJ case reports; Feb 2017; vol. 2017

Publication Date: Feb 2017

Publication Type(s): Case Reports Journal Article

PubMedID: 28232375

Database: Medline

Abstract: A 65-year-old man was referred to our hospital with dyspnoea due to acute heart failure. He presented with swelling in the left clavicle and pustulosis on both soles. An antihypertensive drug and non-invasive positive pressure ventilation improved his condition rapidly. Since all his physical symptoms were compatible with the criteria of SAPHO (synovitis, acne, pustulosis, hyperostosis, osteomyelitis) syndrome, we suspected that the SAPHO syndrome might cause acute heart failure. The aetiology between SAPHO syndrome and heart failure is unclear. Further studies are needed to clarify their relationship.

37. Cultural factors influencing dietary and fluid restriction behaviour: perceptions of older Chinese patients with heart failure.

Authors: Rong, Xiaoshan; Peng, Youqing; Yu, Hai-Ping; Li, Dan

Source: Journal of clinical nursing; Mar 2017; vol. 26 (no. 5-6); p. 717-726

Publication Date: Mar 2017

Publication Type(s): Journal Article

PubMedID: 27532343

Database: Medline

Abstract: AIM AND OBJECTIVESTo explore the cultural factors related to dietary and fluid restriction behaviours among older Chinese patients.BACKGROUNDExcess dietary sodium and fluid intake are risk factors contributing to the worsening and rehospitalisation for heart failure in older patients. Managing the complex fluid and diet requirements of heart failure patients is challenging and is made more complicated by cultural variations in self-management behaviours in response to a health threat.DESIGNQualitative study using semi-structured in interviews and framework analysis.METHODS The design of this study is qualitative descriptive. Semi-structured in-depth interviews were conducted with 15 heart failure patients. Data were analysed through content analysis.RESULTSEight cultural themes emerged from the qualitative data: the values placed on health and illness, customary way of life, preference for folk care and the Chinese healthcare system, and factors related to kinship and social ties, religion, economics and education.CONCLUSIONSDietary change and management in response to illness, including heart failure, is closely related to individuals’ cultural background. Healthcare providers should have a good understanding of cultural aspects that can influence patients’ conformity to medical recommendations.RELEVANCE TO CLINICAL PRACTICEHeart failure patients need support that considers their cultural needs. Healthcare providers must have a good understanding of the experiences of people from diverse cultural backgrounds.

38. Clinical outcomes and economic impact of transcatheter mitral leaflet repair in heart failure patients.

Authors: Asgar, Anita W; Khairy, Paul; Guertin, Marie-Claude; Cournoyer, Daniel; Ducharme, Anique; Bonan, Raoul; Basmadjian, Arsene; Tardif, Jean-Claude; Cohen, David J

Source: Journal of medical economics; Jan 2017; vol. 20 (no. 1); p. 82-90

Publication Date: Jan 2017

Publication Type(s): Journal Article Observational Study

PubMedID: 27552378

Database: Medline

Abstract: BACKGROUNDMitral regurgitation (MR) is a common valvular heart disorder requiring intervention once it becomes severe. Transcatheter mitral repair with the MitraClip device is a safe and effective therapy for selected patients denied surgery. The authors sought to evaluate the clinical outcomes and economic impact of this therapy compared to medical management in heart-failure patients with symptomatic mitral regurgitation.METHODS AND RESULTSThe study was comprised of two phases; an observational study of patients with heart failure and mitral regurgitation treated with either medical therapy or the MitraClip, and an economic model. Results of the observational study were used to estimate parameters for the decision model, which estimated costs, and benefits in a hypothetical cohort of patients with heart failure and moderate-to-severe mitral regurgitation treated with either standard medical therapy or MitraClip. The cohort of patients treated with the MitraClip was propensity matched to a population of heart failure patients, and their outcomes compared. At a mean follow-up of 22 months, all-cause mortality was 21% in the MitraClip cohort and 42% in the medical management cohort (p = .007). The decision model demonstrated that MitraClip increased life expectancy from 1.87-3.60 years and quality-adjusted life years (QALY) from 1.13-2.76 years. The incremental cost was $52,500 Canadian dollars, corresponding to an incremental cost-effectiveness ratio (ICER) of $32,300.00 per QALY gained. Results were sensitive to the survival benefit.CONCLUSIONIn heart failure patients with symptomatic moderate-severe mitral regurgitation, therapy with the MitraClip is associated with superior survival and is cost-effective compared to medical therapy.
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