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# The treatment of heart failure: an ideal challenge for the heart team

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## INTRODUCTION

The incidence and prevalence of heart failure have been markedly increasing over the last years. Within the last few years, congestive heart failure has emerged as the third most common cause of death.

The treatment of heart failure is very heterogeneous and usually handled by different teams. The traditional heart failure clinic examines patients experiencing acute cardiac decompensation or chronic heart failure. These clinical visits usually consist of clinical examination, electrocardiogram, echocardiogram and evaluation of biomarkers (e.g. brain natriuretic peptide). Patients are then discharged home by the physician with a specific recommendation of drug therapy. As the physicians taking care of these patients do not want to lose these patients, this is often a single visit with no follow-up examinations.

If supraventricular or ventricular arrhythmias are detected, the patient will usually be sent to an electrophysiology clinic. After obtaining regular and Holter ECGs, the heart failure patient will then be evaluated for either implantation of an internal cardiac defibrillator or cardiac resynchronization therapy. Again, the patient is usually sent back to the referring physician with a recommendation regarding device therapy [1].

In case of ischaemic cardiomyopathy, the patient may be presented to an interventional cardiologist or heart surgeon to decide between percutaneous coronary intervention or coronary artery bypass grafting. Ideally, this decision-making is done by a coronary heart team.

In case of cardiomyopathy in combination with valvular disorder, these patients may be sent to an interventional cardiologist or cardiac surgeon, ideally he or she will be discussed within the structural heart team consisting of both specialties. The patients are then evaluated for valve intervention (MitraClip, TAVI or transcatheter mitral valve implantation versus surgical valve repair or valve replacement) [2, 3].

In case of terminal heart failure, these patients are usually referred to specialized centres with experience in mechanical circulatory support and heart transplantation [4, 5].

In case of severe acute cardiac decompensation or cardiogenic shock, short-term mechanical solutions may be offered, such as

extracorporeal life support or right or left ventricular unloading (e.g. Impella Systems). If these patients cannot be weaned from temporary support, implantation of mechanical support devices (LVAD and BiVAD) or other options including heart transplantation will then be discussed.

As described above, there are a number of different specialized teams today looking after patients with heart failure. The primary physician, who sees the patient first, will often be insecure whom the patient to send to. Any of these specialized teams listed above will try to offer the patient a treatment option. In general practice, a unified specialized centre, where all different treatment options are discussed and then evaluated together by a specialized heart failure team, is often unavailable. As we have learned from oncology centres, we need interdisciplinary teams and conferences to discuss these complex patients with heart failure. Ideally, these specialized heart failure units will be able to offer the whole spectrum of heart failure therapy including mechanical circulatory support and transplantation.

At the University Heart Center Hamburg, we have successfully established a specialized heart failure team that not only focuses on the previously mentioned diagnoses and drug management of these patients but is also in constant communication with all other teams described above, in order to select the best individualized treatment option for each patient. The patient is first seen in this specialized heart failure clinic for a primary diagnostic evaluation. The patient is then presented to different groups within the heart centre (EPU, coronary team or structural heart team, etc.) to receive their specific evaluation and treatment recommendation. Before the final therapy is initiated, the specialist heart failure team collects all the necessary data and then gives an individual, patient-directed treatment recommendation.

## CONCLUSION

Congestive heart failure is a highly complex cardiac condition which needs careful and differentiated evaluation and diagnostics by different specialists. A specialized heart failure unit within an experienced centre is absolutely essential to evaluate these patients and recommend the best available, individualized treatment option.

This supplemental issue of the *European Journal of Cardio-Thoracic Surgery* will focus on the various treatment options for patients with congestive heart failure.

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