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# Physician's attitude towards end-stage heart failure patient - clinical and bioethical considerations

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## Abstract

*The European Geriatrics Society position statement on the care of dying patients opens by stating that, „providing excellent, humane care to patients near the end of life, when curative means are either no longer possible or no longer desired by the patient, is an essential part of medicine”. Although the essential nature of this discipline certainly cannot be denied, much of the literature dedicated to this topic has revolved around terminal care provided to patients who have cancer diagnoses. Heart failure presents its own unique challenges to the clinician who desires to make the recommendations of the European Geriatrics Society a tangible reality. This article focuses on both specific clinical recommendations and an analysis of some of the ethical issues involved in the provision of care to elderly patients in the terminal stages of heart failure*

**Key words:** *end-stage heart failure, palliative care services, ethical aspects*

## Introduction

End stage heart failure is associated with a high rate of morbidity and mortality. End stage of the disease is associate lack of response to medical treatment, persistent symptoms that implies repeated hospitalizations, prolonged and expensive. These patients had severe left ventricular dysfunction being symptomatic at rest despite optimization of pharmacological treatment and associate multiple comorbidities as chronic kidney failure, anemia, and chronic obstructive pulmonary disease (Andrew Daley Bradford Marie Curie Hospice and Bradford

Teaching Hospitals NHS Foundation Trust, 2006). Although heart transplantation is the only treatment that could improve the prognostic, there are a small number of patients that benefit of it. Moreover, because time on waiting list is prolonged, the patient state is continuously worsening demanding repeated hospitalizations for new decompensation episodes. Anyway, most of the patients with end stage heart failure are old and not eligible for heart transplantation and medical treatment has its limits (Andrew Daley Bradford Marie Curie Hospice and Bradford Teaching Hospitals NHS Foundation Trust, 2006).

### **How we establish the diagnostic of end stage heart failure?**

The prognosis evaluation to end stage heart failure patient proved to be difficult and the physician ability in predicting mortality, questionable. Clinical trials showed that the establishment of mortality prediction parameters to end stage heart failure patients is difficult being involved many factors: small groups' studies, inadequate cases selection and followed parameters, different measurement techniques, study period, weak results reproducibility. The independent prediction parameters are: NYHA stage, left ventricle dimensions (measured by echocardiography), ejection fraction, myocardial ischemia, hyponatremia (Bristow et al., 2004).

The end stage heart failure patients have also a high risk of sudden death, fact that makes more difficult making of a prediction model. Approximately 60% of patients die suddenly; anyway, the establishment of prediction factors for sudden death remains controversial.

Some of the predictive factors for sudden death are: type B atrial natriuretic peptide (ANP), ejection fraction, telediastolic diameter of left ventricle, unsustained ventricular tachycardia episodes and diabetes mellitus. Sudden death incidence is influenced by the use of implantable cardioverter, fact that decrease mortality from ventricular arrhythmias. It was proven that association of implantable cardioverter with resynchronization therapy decrease mortality up to 36%.

Thus, the prognostic evaluation in heart failure remains unclear. To patients with heart failure that do not die sudden the health state worsens progressively; this process is interrupted by acute episodes that frequently need hospitalization and whom compensation is uncertain. Clinical marker of patients who do not die suddenly is the association of dyspnea with low cardiac output. Other common symptoms are pain (78%), depression (59%), insomnia (45%), anxiety (30%), anorexia (43%), constipation (37%), nausea (32%) (2).

## **Communication improving**

Because of uncertain prognosis it was remarked that end stage heart failure patients has a minimal understanding of their condition and low implication in therapeutically decisions. An interview conducted in UK identified some specific problems occurred in treatment of these patients. It was noticed that patients showed a low interest for their own clinical condition, treatment and often they do not see an association between symptoms (dyspnea, edema) and cardiac status. Also patients and relatives don not feel particularly involved in taking decisions about the disease and therapeutically strategies were perceived difficult despite their efficiency.

These data clearly states the need of more profound interpersonal communication and finding more creative ways of applying treatment to these patients. Communication between physician and family is essential for a good palliative care (Ward, 2002).

## **Palliative treatment in end stage heart failure**

The difficulty of establish the end stage heart failure evolution has lead to „prognosis paralysis” regarding optimal time to start palliative treatment. It has been suggested that end stage heart failure patients should be considered candidates to palliative treatment if their physician would answer „No” to question „Would I be surprised if my patient would have die in next 12 months?” Other physicians recommend initiation of palliative treatment short time after compensation of a new heart failure exacerbation. What becomes clear from experience of many is that palliative treatment should be initiated more early in disease course that it is now (Eulàlia, Pérez-Villa, Cuppoletti, 2006).

The congestive heart failure marker is dyspnea. The initial management of dyspnea is the classical one: diuretics, vasodilatators, positive inotropes, and evacuation of refractory pleural effusions by thoracocentesis. Severe dyspnea, refractory to treatment, could be palliative treated with morphine 2-5mg, repeated to 5-10 minutes if necessary. Oxygen therapy proved also to be useful.

As we mentioned before, the pain was mentioned to 80% of end stage heart failure patients. Pain treatment with non steroid anti-inflammatory drugs is relatively contraindicated to these patients because of accentuation of sodium retention, reducing effects of angiotensin converting enzyme inhibitor (ACEI) and degradation of kidney function. Opium derivates similar to the ones used for dyspnea improving are usually beneficial to these patients (Gonseth, Guallar-Castillón, Banegas, Rodríguez-Artalejo, 2004).

Fatigability is the consequence of a low cardiac output and response to inotrope positive agents excepting terminal heart failure stages. The fatigability could be correlated with depression which could be treated with serotonin inhibitors but also psychologic, spiritual and social support is very important.

Comorbidities treatment is also beneficial. Use of the continuous positive pressure ventilation to patients with sleep apnea secondary to heart failure determined increase of nocturnal oxygen saturation, improving ejection fraction and effort tolerance. Similar, anemia treatment with erythropoietin improves walking distance and quality of life indexes (Gonseth, Guallar-Castillón, Banegas, Rodríguez-Artalejo, 2004).

End stage heart failure patients has some psycho-social problems: the burden of living with a chronic, fatal disease, marginalization from social life, failure to achieve some purposes, personal ideals, impossibility to have a daily activity, improving dependency to others and decreasing self respect.

Terminal stages patients have some spiritual difficulties characterized by discouragement, isolation and self confidence lost. They have problems about meaning of life, practical problems about dependency from relatives and social institutions, feelings of being abandoned by health system, losing of dignity of human relations, the will to die (Hauptman, Haranek, 2003).

Solutions to these psycho-social problems includes talk about own disease and the meaning of suffering, involving physician, psychologist and priest. In many cases this support is offered by palliative medical support with experience in care of end stage patients.

### **Implantable devices and end stage heart failure.**

More frequent use of implantable device (resynchronization therapy and implantable cardioverters) lowered morbidity and mortality due to heart failure. These devices raise ethical problems to end stage heart failure patients who need minimize or reduce therapeutically actions. The right of patients in terminal stage but with intact decision capacity to refuse any medical intervention is well established by bioethics. This right applies to patients having these implantable devices involving inactivation of implantable cardioverter (David, 2007). Inactivation of implantable devices to patients with end stage heart failure was coded as class I recommendation by American heart Association in 2005 in Chronic heart failure guide.

## **Cardiopulmonary resuscitation**

Cardiorespiratory arrest is not an unusual event to patients with heart failure. In the international SUPPORT study was found that 23% of patients proffered not to be resuscitated in eventuality of cardiorespiratory arrest. The one who wanted not to be resuscitated were older, had a worse cardiovascular status in last two weeks having a worse prognosis than ones who preferred to be resuscitated. It seems that patient's options not to be resuscitated could have a prognostic significance by itself. Although the prognostic of heart failure patients remains variable and quickly modifiable so the decision about resuscitation as all medical decisions about this patient should be periodically revised as long as clinical status changes (Hauptman, Haranek, 2003).

## **Palliative sedation**

Patients with end stage heart failure have frequent hallucinations, delirium, myoclonia and convulsion. Hallucinations and delirium could be controlled most of the time with small doses of haloperidol, Olanzapine or Risperidone. To patients with uncontrolled delirium and to whom who associates myoclonia or convulsions sedative therapy is needed. Frequent used drugs are midazolam, lorazepam and propofol. The use of these agents in this context was named palliative sedation (McClung, 2007).

The use of palliative sedation raised many bioethical controversies due to the its three consequences: lowering the pain, abolish of consciousness state but also potential life shortening to patients who associates hypotension and low cardiac output that could be worsened by sedative therapy.

The adequate use of palliative sedation was justified by two bioethical principles frequently cited: double effect principle and proportionality principle. The double effect principle sustain that a therapeutically action could have beneficial effects but also negative effects both of them anticipated. It is necessary that this action has beneficial effects, action itself not to be immoral, obtaining of beneficial effect not to be realized by negative effects and finally to be a proportionality between wanted and unwanted effects.

In case of palliative sedation, intention is to decrease the suffering not to precipitate the death. Sedation itself is not considered immoral, independently of its consequences and the positive effect of reducing the suffering is not probably realized by the negative effect of reducing the survival. Finally, the beneficial effect of improving symptoms prevails potential negative effects of arterial hypotension and supplementary lowering of cardiac output (McCarthy, Lay, Addington-Hall, 1996).

## **The pitfalls of palliative therapy**

One of the pitfalls of palliative therapy is the concept of „triumphalism of palliative treatment”. In sustained efforts of the team involved in palliative treatment there is the risk to ignore the fact that death represents a chaotically disintegration of life and is fundamentally uncontrollable. The efforts to control it could represent an unjustified denial of an existential fact – end of life (Mellar, Davis, 2005).

From ancient time there is the concept of „painless death”. Observers from many domains, physician, priest, family, has identified more components of „painless death”. Only one of its components was pain and symptoms relief. The others were: patient awareness of the moment, the spiritual, religious and emotions preparing for death, the support of family and relatives (Johnson, 2007).

This concept was mentioned about ten years ago by the words:”Often, the best treatment that we could offer is time spent with patients and their families, listening and appreciates, reaching this way a physician role that is hard to teach and harder to learn in medical institutions dominated by supraspecialization centers” (Stewart, Macltyre, Hole, Capewell, McMurray, 2001).

## **Conclusions**

The end stage of heart failure represents a challenge for patient but also for physician as difficult as the case of patients with end stage cancer but with hallmarks characteristic to cardiovascular pathology. Among these characteristics are indefinite prognosis, acute decompensation episodes followed by relatively quick improving and more frequent use of implantable devices.

The medical literature clearly states the importance of communications with patient and family and better information of patient since early disease stages about its clinical condition.

Palliative interventions, including hospitalization in palliative treatment centers are indicated to patients with progressive worsening of left ventricular dysfunction.

Deactivation of implantable devices to patient in end stages is an adequate measure ethically but it has to be discussed with patient and family. Also, the patient preferences about the resuscitation should be periodically revised because the end stage heart failure patient attitude towards resuscitation changes frequently accordingly its clinical evolution.

A recent conference identified five questions regarding treatment of patients with end stage heart failure: How could be lowered the physical and psycho-

social burden of patient and family? Which patients could benefit from which interventions and how could be better advised? Which interventions improve quality of life and are agreed by both the patient and the family? How could be realize a better cooperation between hospitals and palliative centers to allow earlier access of heart failure patient? How could be prognostic and treatment communicated better?

These questions summarize actually the deficiencies of the health system in management of patients with end stage heart disease.

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