

## Decompensated or Acute Heart Failure

### *Insuficiencia cardíaca descompensada o aguda*

#### INTRODUCTION

Acute heart failure is generated as a consequence of impaired heart function, and is the main cause of hospitalization in adults over 65 years of age. Most persons suffering from heart failure will require at least one hospital admission, representing a challenge both for the medical community as for patients' quality of life. Although there has been progress in the treatment of ambulatory patients, readmissions are still an issue to be solved.

#### SYMPTOMS OF CARDIAC DECOMPENSATION

Heart failure is manifested by exacerbated breathing difficulty (dyspnea) during exertion, but it can also occur at rest, with need to sit up in bed at night (orthopnea), iterative dry cough, decreased urination (diuresis) and fluid accumulation in the legs (edema) (Figures 1 and 2).

Faced with this respiratory difficulty with "thirst" for air, it is necessary to seek medical help, as the patient should be hospitalized for immediate treatment. According to the severity of the condition, treatment will be started in the emergency room and continued in the General Ward or Coronary Care Unit.

#### TREATMENT

These symptoms are due to fluid retention produced by decompensated heart failure and the basis of treatment consists in eliminating the excess fluid with intravenous diuretics. Furosemide is the drug most commonly used for this purpose.

In patients with high blood pressure, diuretics are combined with intravenous vasodilators (nitroglycerin and sometimes sodium nitroprusside) to normalize it. In those with low blood pressure (a minority of patients), drugs which stimulate the contraction of the heart, called inotropic drugs, are added (such as dopamine or dobutamine).

In very few cases it is necessary to use invasive measures, as coronary angiography to treat a coronary artery obstruction, or perform dialysis (when the response to diuretics is not optimal).

Moreover, in some patients with extreme respiratory difficulty, noninvasive respiratory assistance (with masks known as C-PAP or Bi-PAP) or invasive respiratory assistance, inserting a tube in the airway (trachea) connected to a respirator, is used to relieve respiratory work and improve patient ventilation.

#### DISCHARGE

It represents the greatest challenge. After the condition prompting hospitalization is overcome, patients are discharged; however, they enter a period of vulnerability, as they stop having permanent medical care and it is necessary to fulfill the therapeutic instructions indicated at discharge.

In order that the transition is not a jump into the void, detailed indications and instructions provided by the doctor are essential so that all doubts are answered and the patient understands the alarm signals. Also, the following visit is determined, which must be within the first week.

One out of four discharged patients will be readmitted in the following 12 weeks, and the first cause is the lack of guidelines and their adequate fulfillment once the patient has returned home.

Compliance with non-pharmacological therapeutic measures (saltless diet and avoidance of foods that have it, vaccination and close medical surveillance) and prescribed pharmacological measures, allows most patients to have an acceptable quality of life, except in advanced cases of the disease or when suffering from decompensation or exacerbation episodes.

#### THE STABLE PATIENT

The challenge consists in avoiding decompensation. In this stage, the coordination among the medical team, the patient and his family is essential.

Non-compliance of pharmacological as well as non-pharmacological therapeutic indications is the frequent cause of decompensation.

Education about heart failure, provision of alarm signals and teaching self-care, adapted to the patient and family, and availability of a reference to consult in case of symptoms or doubts are vital to prevent decompensation.



Fig. 1. Edemas



Fig. 2. Chest X-rays. A. Without heart failure. B. With heart failure.



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#### REFERENCES

- Sociedad Argentina de Cardiología. Área de Consensos y Normas. Consenso de Insuficiencia Cardíaca Crónica. *Rev Argent Cardiol* 2016;84:Supl 3.
- Sionis A; SEC Working Group for the 2016 ESC Guidelines for the Diagnosis and Treatment of Acute and Chronic Heart Failure: Sionis Green A, Manito Lorite N, Bueno H, Coca Payeras A, Díaz Molina B, et al. Comments on the 2016 ESC Guidelines for the Diagnosis and Treatment of Acute and Chronic Heart Failure. *Rev Esp Cardiol (Engl Ed)*. 2016;69:1119-25. <http://doi.org/bwjf>
- Corradi L, Pérez G, Costabel JP, González N, Da Rosa W, Altamirano M y cols. Insuficiencia cardíaca descompensada en la Argentina. Registro CONAREC XVIII. *Rev Argent Cardiol* 2014;82:519-28.
- Fairman E, Thierer J, Rodríguez L, Blanco P, Guetta J, Fernández S. Registro Nacional de Internación por Insuficiencia Cardíaca 2007. *Rev Argent Cardiol* 2009;77:33-9.

#### INFORMATION IN THE WEB

- American Heart Association. [www.heart.org](http://www.heart.org)
- [www.cardiosmart.org/MI-CORAZON](http://www.cardiosmart.org/MI-CORAZON)

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