

# **EFFECT OF SODIUM $Fe^{+++}$ EDTA (FERACHEL FORTE®) ADMINISTRATION ON CARDIOVASCULAR RISK EVALUATION: EXPLORATION OF THE HRV IN THE FREQUENCY DOMAIN.**

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## **BACKGROUND:**

Anaemia is a frequent co-morbidity in older patients affected by chronic heart failure and/or respiratory diseases. Using the Herat rate variability analysis of the spectral components in the frequency domain is possible to explore the neurovegetative system. Numerous physiological condition and disease have an impact factors on the dimension of the area of each peak of frequency range on the HRV power spectrum. Some studies have used spectral HRV and blood pressure variability analysis in a large group of patients and it has been observed that the increase in total HRV and LF power is associated with survival while the progressive decreases of HRV have been associated with deterioration and death. Alterations of the spectral analysis are correlated with the severity of the disease, the use of this method for the assessment of the state of cardiac and non-cardiac diseases, could provide to evaluate the prognosis and determine the effectiveness of intervention.

**AIM:** The aim of this study is to evaluate the safety of Sodium  $Fe^{+++}$  EDTA 2 cp/24h for a period of 24 days in elderly with secondary anaemia. Therefore, we have explored the HRV frequency domain to confirm our preliminary data reported at the 118° National congress Of Internal Medicine 2017 about the HRV explored in the time domain (1).

**METHODS:** We enrolled 16 elderly patients treated with oral administration of Sodium  $Fe^{+++}$  EDTA. The enrolled patients have a recent diagnosis of secondary anaemia due to iron deficiency and/or low-moderate kidney failure. We measured also the ECG signal at basal condition and after the treatment with Sodium  $Fe^{+++}$  EDTA.

**RESULTS:** Oral iron supplementation with Sodium  $Fe^{+++}$  EDTA (FERACHEL FORTE®) is related with a safety about the cardiovascular risk il older patient as declared in a recent study presented at the 118° National Congress of Internal Medicine (SIMI) about the HRV explored in the time domain.

**DISCUSSIONS:** The Therapy with Sodium  $Fe^{+++}$  EDTA, (FERACHEL FORTE®) is a new formulation of  $Fe^{++}$  used for oral treatment of patients with secondary anaemia. We noted the real superiority of the oral administration about the cardiovascular risk in older patients in comparison with the intravenous administration of gluconate Fe (1).

**CONCLUSION:** We can confirm that Sodium  $Fe^{+++}$  EDTA can be a valid alternative to gluconate  $Fe^{++}$  intravenous therapy (gold standard) in the treatment of secondary anaemia in elderly patients because during the treatment there are not variation about cardiovascular risk evaluated exploring the HRV frequency domain. Our preliminary results are comfortable, like the data about the HRV explored in the time domain, but not applicable to a broad spectrum of patients with secondary anaemia.