

Analysis of the use of erythropoiesis-stimulating agents in a university hospital

V. Escudero-Vilaplana¹, A. Vega-Martínez², J.M. López-Gómez², C.G. Rodríguez-González¹, B. Marzal-Alfaro¹, P. Arrabal-Durán¹, R. Romero-Jiménez¹, A. Giménez-Manzorro¹, I. Marquínez-Alonso¹, M. Sanjurjo-Sáez¹

¹Hospital General Universitario Gregorio Marañón, Pharmacy Department, Madrid, Spain.

²Hospital General Universitario Gregorio Marañón, Nephrology Department, Madrid, Spain.

BACKGROUND AND OBJECTIVE

- The use of erythropoiesis-stimulating agents (ESA) in the treatment of anemia due to chronic kidney disease (CKD) is highly variable regarding patient characteristics and doses, including the equivalence among ESAs stated in the label product
- The **objective** was to evaluate the use of ESAs for anaemia due to CKD in a university hospital.

METHODS

- ✓ **Design:** A descriptive, transversal study was performed in patients treated with ESAs for anaemia secondary to CKD in a university hospital over a month.
- ✓ **Collected variables:** demographic characteristics, ESA type and dose, prescribing service, haemoglobin levels (Hb), serum creatinine (Cr), C-reactive protein, albumin, ferritin, transferrin saturation index, folate, vitamin B12 and parathormone (PTH).
- ✓ **Principle variable:** ESA monthly dose.
- ✓ **Secondary aims:**
 - *Effectivity:* defined as haemoglobin levels.
 - *Safety:* defined as percentage of patients with Hb >13 g/dl.

RESULTS

- 333 patients were included (52.6% female; median age 75.2 years).
- 69.1% patients were on predialysis, 27.6% on haemodialysis and 3.3% on peritoneal dialysis.
- 97.0% prescriptions were from Nephrology Service.
- Patients treated with CERA had more favorable levels of Cr, albumin and PTH than those treated with epoetin and darbepoetin α ($p < 0.05$).

	EPOETIN (23.4%)	DARBEPOETIN α (41.4%)	CERA (35.1%)
Dose / month	12857 (8571, 25714) IU	86 (43, 129) mcg	75 (50, 100) mcg
Effectivity (Hb levels)	11.9 (11.3, 12.5) g/dl	11.9 (11.1, 12.8) g/dl	12.1 (11.0, 12.8) g/dl
Safety (patients with Hb >13 g/dl)	11.5%	19.6%	22.2%

Data is expressed with median (p25, p75)

Non-statistical differences were found regarding effectivity and safety

CONCLUSIONS

- ✓ Effectivity and safety were similar for different types of ESAs.
- ✓ CERA dose was lower than the recommended equivalence stated in the label product for the doses of epoetin and darbepoetin α obtained, although patients treated with CERA had a better kidney function.