



COST-EFFECTIVENESS ANALYSIS OF PATIENTS IN PERITONEAL DIALYSIS WITH METHOXY POLYETHYLENE GLYCOL-EPOETIN BETA VERSUS DARBEPOETIN ALFA IN SANTIAGO DE COMPOSTELA UNIVERSITY HOSPITAL COMPLEX, SPAIN.

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OBJECTIVE

80% of chronic kidney disease (CKD) patients included in a peritoneal dialysis program receive erythropoietin stimulating agents (ESA) for the anemia treatment. The purpose of this study is to evaluate the cost-effectiveness of methoxy polyethylene glycol-epoetin beta (C.E.R.A.) compared with darbepoetin alfa (DA) in a population of CKD patients in a peritoneal dialysis program.

METHODS

Patients undergoing peritoneal dialysis were included in the study: 29 with C.E.R.A. and 9 with DA. A cost effectiveness analysis was developed and estimate the incremental cost-effectiveness ratio (ICER) of C.E.R.A. and DA in Spain under the hospital perspective for the last 12 months. Effectiveness, in terms of percentage of patients within range 11-12 g/dl hemoglobin levels, was calculated from the last three analysis. Demographic variables such as sex and age, and nutritional variables BMI and albumin, as dialysis efficiency factor value KTV were used to compare both groups. Unitary costs (€2010) were obtained from de Spanish Catalogue of Medicines.

RESULTS

		CERA (n=29)			DARBO (N=9)	
		MEN	WOMEN		MEN	WOMEN
total		18	11		4	5
Age average	59,36	49,8	42,8	38,4	41,5	36,3
Weight average (Kg)	73,90	79,8	56,1	68,8	89,2	55,3
Tall size (m)	1,65	1,69	1,38	1,61	1,75	1,52
BMI average	26,90	27,7	21,7	25,9	29,1	23,86
Albumin (g/dL)	3,70	3,9	3,3	3,7	3,5	3,8
KTv	1,70	1,74	1,65	1,8	1,75	1,86
monthly dose ESA	92,30	101,3	76,21	136,8	97,9	160

		CERA	
total	29	18	11
Hb level (10-12 mg/dL)	19	12	7
Effectiveness	65%	67%	64%
monthly cost	180,92	199,7	150,14
year cost	2.171,0	2.396,4	1.801,7
Cost Efficacy	3.340,1	3.594,6	2.831,2

		DARBO	
total	9	4	5
Hb level (10-12 mg/dL)	5	2	3
Effectiveness	50,40%	50%	51%
monthly cost	228,5	197,52	253,3
year cost	2.742,0	2.370,2	3.039,6
Cost Efficacy	5.440,5	4.740,5	5.960,0

DISCUSSION

Both groups are similar taking into account the nutritional, demographic and KTV value. The mean dose of C.E.R.A. was 92.3 mcg/dl while the mean dose of DA was 136.8 mcg/dl. Treatment with C.E.R.A. provided better results in effectiveness than DA (64.29% versus 50.4 %). The average yearly cost in the study was €3.340 with C.E.R.A. and €5.440 with DA. Savings per patient treated with C.E.R.A. were €2.100 per year. Sensitivity analysis confirmed the stability of the results.

CONCLUSIONS

In Santiago de Compostela University Hospital Complex treatment of anemia in CKD patients included in a peritoneal dialysis program with methoxy polyethylene glycol-epoetin beta is a cost reducing strategy in comparison with darbepoetin alfa.

CONFLICT OF INTEREST

Nothing to disclosure.

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