Hospital Universitario de Móstoles

ivan.oterino.moreira@salud.madrid.org

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IMPACT OF ADVERSE DRUG REACTIONS ON LENGTH OF STAY AND MORTALITY IN HOSPITALIZED PATIENTS THROUGH A CLINICAL ADMINISTRATIVE NATIONAL DATASET

I. OTERINO MOREIRA[1], S. LORENZO-MARTÍNEZ[2], S. SANCHEZ SUAREZ[3], M. PEREZ ENCINAS[4], J.A. VINAGRE ROMERO[5], C. AGUILAR CASADO6, M.M. GARCIA GIMENO6, C. CALDERON ACEDOS1, L. CORRALES PÉREZ1, M. SEGURA BEDMAR[1].

1. MOSTOLES UNIVERSITY HOSPITAL, PHARMACY DEPARTMENT, MOSTOLES, SPAIN. 2. ALCORCON FOUNDATION UNIVERSITY HOSPITAL, QUALITY DEPARTMENT, ALCORCON, SPAIN. 3. SAN CARLOS CLINICAL HOSPITAL, PHARMACY DEPARTMENT. 4. ALCORCON FOUNDATION UNIVERSITY HOSPITAL, PHARMACY DEPARTMENT, ALCORCON, SPAIN5. 5. THE ESCORIAL UNIVERSITY HOSPITAL, QUALITY DEPARTMENT, SAN LORENZO DE EL ESCORIAL, SPAIN. 6. THE ESCORIAL UNIVERSITY HOSPITAL, PHARMACY DEPARTMENT, SAN LORENZO DE EL ESCORIAL, SPAIN.

BACKGROUND AND IMPORTANCE

Adverse Drug Reactions (ADRs) cause 5-10% of hospital admissions and occur in 10-20% of hospitalized patients.

AIM AND OBJECTIVES

To find out the impact of ADRs on patients' hospitalization.

MATERIALS AND METHODS

- Retrospective case-control study that included patients' hospitalization over 17 years of age during the period 2017-2023, using a clinical administrative national dataset.
- Cases were defined as hospitalizations with a record of ADRs, in terms of chapter T36-T50 of ICD-10. Controls were the remaining hospitalizations exempt from these ADRs codes.
- Medians were compared by Wilcoxon test and proportions by Chi2. Two multivariate regression models and two propensity-score matching models were constructed to study the influence of ADRs on the length of hospital stay and mortality.

RESULTS

126,075 hospitalizations were analyzed Prevalence of ADRs 7.08% (95%IC 6.90-7.20).

	non-ADRs	ADRs	Sig.
Hospitalization episodes, n (%, 95%IC)	117,145 (92,92%,90,86-93,54)	8,930 (7,08%, 6.90-7.20)	
Men, % (95%CI)	53.38% (53.10-53.70)	51.10% (50.10-52.10)	
Age, median (IQR)	72 years (56-82)	77 years (68-85)	p<0.0000
vanWalraven comorbidity index, median (IQR)	4 (2-8)	7 (4-13)	p<0.0000
Hospital length of stay, median (IQR)	4 days (2-8)	7 days (4-13)	p<0.0000
Hospital mortality , % (95%CI)	4.73% (4.60-4.90)	6.55% (6.00-7.10)	p<0.0000

	Magnitude effect	95%IC	Sig.
Length of stay	IRR=1.412	1.376-1.448	p>|z|<0.000
mortality rate	OR=0.807	0.743-0.877	p>|z|<0.000
*Using sex, age and IW as covariates			

	OR	95%IC	Sig.
Age	1.05	1.03-1.06	p>|z|<0.000
Female sex	1.15	1.10-1.20	p>|z|<0.000
Length of stay	1.54	1.51-1.57	p>|z|<0.000
vanWalraven comorbidity index (IW)	1.60	1.56-1.63	p>|z|<0.000

	Matching test Coefficient	95%IC	Sig.
Length of stay	3.226	2.922-3.532	p>|z|<0.000
Mortality rate	(-)0.007	(-)0.12- (-)0.026],	p>|z|<0.000
*Control patient: the same sex, age and comorbidity (IW) free of ADRs			

Increase of 3.226 days in length of stay

CONCLUSION AND RELEVANCE

- ✓ Patients with ADRSs are older and have more comorbidity.
- ✓ ADRSs are associated with increase length of hospital stay but advanced analysis shows no increase in mortality.