Hospital care of endometriosis in Spain:

A retrospective multicenter analysis of patient characteristics and costs

Josep Darbà [1], Meritxell Ascanio [2], Alicia Marsà [2]

[1] Universitat de Barcelona, Department of Economics. [2] BCN Health Economics & Outcomes Research S.L.

Background

Endometriosis is a complex syndrome that can affect numerous tissues, with a wide spectrum of clinical features and potentially serious outcomes including pelvic pain and infertility [1]. The diagnosis and management of endometriosis can be challenging, and effective therapeutic interventions are lacking. Additionally, large variations exists between countries in medical costs, and no data is available for Spain [2].

The aim of this study was to evaluate the characteristics of patients diagnosed with endometriosis in Spain, to measure incidence within the hospital setting and the associated medical costs.

Methods

Admission records of women with endometriosis registered between 2009 and 2018 were obtained from a Spanish hospital discharge database.

All records in which endometriosis was listed as the admission motive were claimed and the primary diagnosis was used to classify patients according to the tissue affected.

Age-adjusted hospitalization rate was measured as the annual number of women admitted with endometriosis within the total number of admission files in the database. Direct medical costs were calculated based on mean costs of medical procedures determined by the Ministry of Health.

Results

Patient characteristics

Data from 41,118 patients with endometriosis was obtained.

Median age was 37 years (IQR=11), increasing significantly over the study period (p<0.0001) (Figure 1A).

The most frequent secondary diagnoses were inflammatory disease of female pelvic organs (21.7%) and neoplasms of uterus (9.2%). Only 0.9% of admissions registered ovary neoplasms.

The age-adjusted hospitalization rate of endometriosis measured in this database was 12.5 cases per 10,000 patients, decreasing over the study period (p<0.0001).

The admissions registering ovarian endometriosis decreased over the study period (p<0.0001), whereas the diagnosis of adenomyosis and endometriosis of other tissues increased (p<0.0001) (Figure 1C).

To evaluate the cases of endometriosis in multiple tissues, subsequent endometriosis diagnoses were analyzed by first diagnosis; 69.2% of patients admitted with endometriosis of the fallopian tube and 59.0% of those with endometriosis of the pelvic peritoneum were diagnosed with ovarian endometriosis.

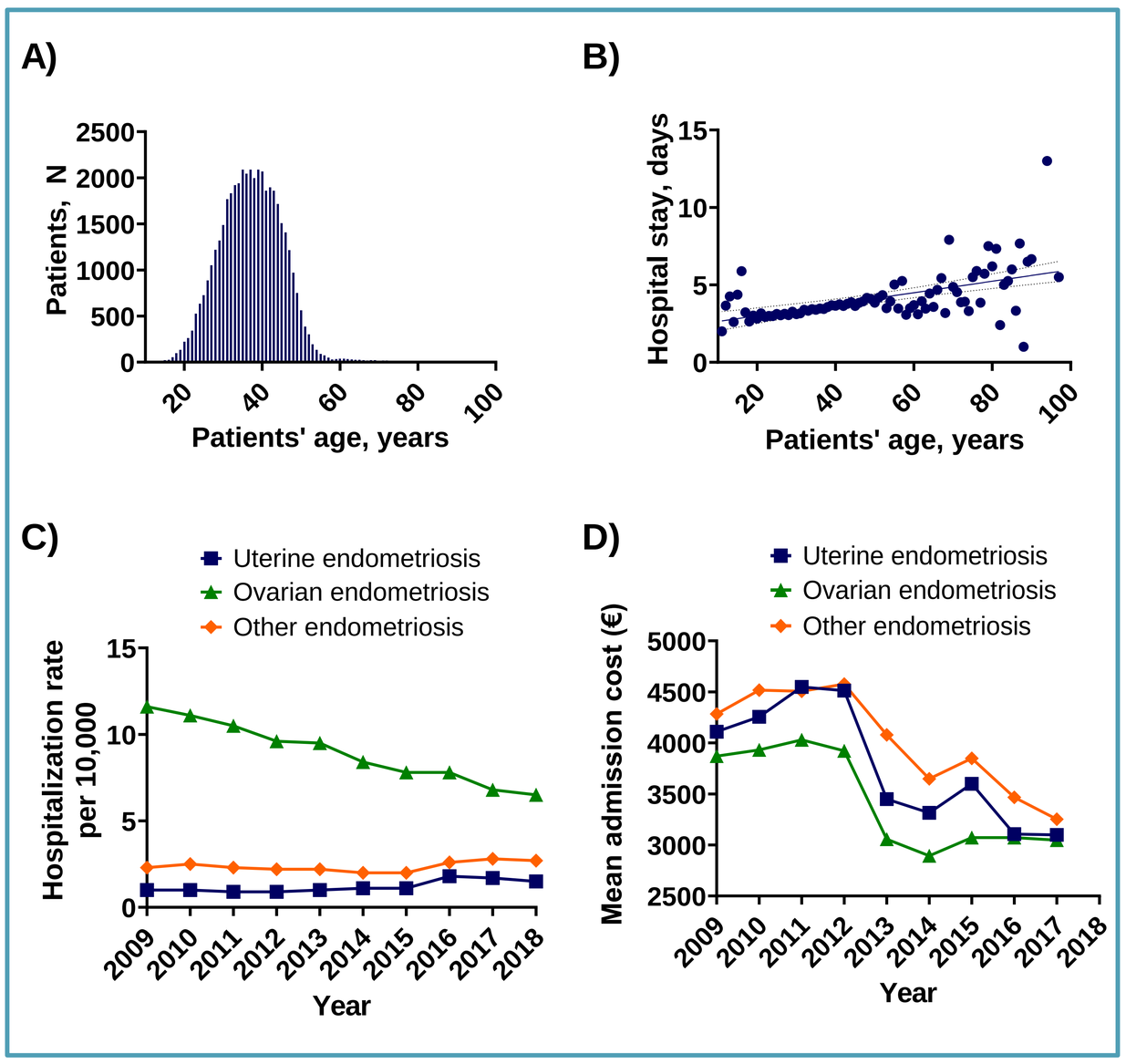

Figure 1. A) Age distribution of the patient population; B) Linear fit of hospital stay per patients' age with 95% confidence bands; C) Hospitalization rate per 10,000 admissions; D) Mean cost per admission over time.

Use of healthcare resources

Data corresponded primarily to inpatient and programmed admissions, with a median length of stay of 3 days that increased significantly with patients' age (p<0.0001) (Figure 1B).

Admissions were mainly associated to surgical procedures (73.3%), namely local excision or destruction of lesions (Table 1).

The majority of admissions (96.8%) registered operations on ovaries:

- 52.7% of procedures corresponded to the local excision or destruction of ovarian lesion or tissue;
- 30.3% were unilateral or bilateral oophorectomies;
- and 10.3% the lysis of adhesions of ovary and fallopian tube.

Direct medical cost

Mean admission cost was €3566 over the study period (Table1).

Seventy-one percent of all the costs were registered in patients primarily admitted with ovarian endometriosis.

The higher costs per admission were registered in patients admitted due to intestine endometriosis, reaching the €8052.

Higher admission costs were associated to programmed admissions, surgical procedures and patients' age.

Mean cost decreased significantly between 2012 and 2014 (p<0.0001) and increased between 2014 and 2017 (p<0.0001) (Figure 1D).

Table 1. Direct medical costs in hospital settings per tissue affected (€).

	Total	Adenomyosis	Ovarian endometriosis	Other tissue
Mean admission cost	3566	3778	3433	4020
Admissions ≤ 3 days	3343	3359	3319	3458
Admissions > 3 days	4150	4070	3939	4737
Urgent admissions	3092	2853	2886	3652
Programmed admissions	3737	3884	3627	4173
Surgical procedures	3822	4046	3688	4426
Medical procedures	1774	1816	1662	2004
≤ 37 years of age	3541	3394	3463	3895
> 37 years of age	3708	3837	3559	4189

Conclusions

The majority of admissions in hospital settings are associated to the removal of ovarian lesions, with hospitals stays of 3 days. Data suggests a decrease in the number of cases treated as hospital inpatient admissions over the study period. Older patients, surgical procedures and lengthier admissions are associated with higher medical costs.

REFERENCES

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Corresponding author: Josep Darbà (darba@ub.edu)