Antidepressant Use in Denmark, Germany, Spain, and Sweden From 2009 to 2014: Incidence and Comorbidities of Antidepressant Initiators

Joan Forns,[1] Anton Pottegård,[2] Tammo Reinders,[3] Beatriz Poblador-Plou,[4] Rosa Morros,[5,6,7] Lena Brandt,[8] Miguel Cainzos-Achirica,[1] Maja Hellfritzsch,[2] Tania Schink,[3] Alexandra Prados-Torres,[4] Maria Giner-Soriano,[5,6,7] David Hägg,[8] Jesper Hallas,[2] Jordi Cortés,[9] Emmanuelle Jacquot,[10] Nicolas Deltour,[10] Susana Perez-Gutthann,[1] Manel Pladevall,[1] Johan Reutfors[8]

[1]Epidemiology, RTI Health Solutions, Barcelona, Spain; [2]University of Southern Denmark (Institute of Public Health), Odense, Denmark; [3]Leibniz Institute for Prevention Research and Epidemiology–BIPS, Bremen, Germany; [4]EpiChron Research Group, Aragon Health Sciences Institute (IACS), IIS Aragón, Miguel Servet University Hospital, Zaragoza, Spain; [5]Institut Universitari d'Investigació en Atenció Primària Jordi Gol (IDIAPJGol), Barcelona, Spain; [6]Universitat Autònoma de Barcelona, Bellaterra (Cerdanyola del Vallès), Spain; [7]Institut Català de la Salut, Barcelona, Spain; [8]Centre for Pharmacoepidemiology, Department of Medicine, Solna, Karolinska Institutet, Karolinska University Hospital, Stockholm, Sweden; [9]Universitat Politècnica de Catalunya, Departament d'Estadística i Investigació Operativa, Barcelona, Spain; [10]Pharmacoepidemiology Department, Les Laboratoires Servier, Paris, France

DISCLOSURES

BACKGROUND

- Antidepressants are one of the drug types with the highest prescription rates in Europe.

- The number of approved antidepressants has increased dramatically in recent decades. Antidepressant choice is influenced by factors related to the specific antidepressant drug profile but is also related to prescriber characteristics (e.g., specialty: psychiatrist or general practitioner); reimbursement policies in each country; or patient characteristics, including age, sex, and severity of the depression or the presence of comorbidities.

- No studies have described the use of antidepressants and the characteristics of adult users in Europe since 2012.

OBJECTIVE

- To describe patterns of use and characteristics of adult users of 10 of the most commonly prescribed antidepressants from 2009 to 2014 in Denmark, Germany, Spain, and Sweden.

METHODS

- This drug utilization study was conducted using data collected during a postauthorization safety study investigating the potential risk of acute liver injury associated with the use of agomelatine compared with other antidepressants.

- 10 antidepressants were included:
  - 5 selective serotonin reuptake inhibitors: citalopram, escitalopram, fluoxetine, paroxetine, and sertraline
  - 2 serotonin-norepinephrine reuptake inhibitors: duloxetine and venlafaxine
  - 1 tricyclic antidepressant: amitriptyline
  - 1 noradrenaline and specific serotonergic antidepressant: mirtazapine
  - 1 melatonergic agonist and 5-HT2C antagonist: agomelatine

- The list of study antidepressants included different classes of the most commonly used antidepressants in the participating countries. Agomelatine was selected for regulatory reasons.

- Adult initiators of each study antidepressant from 2009 to 2014 were identified in the Danish and the Swedish national registers, GePaRD (Germany), EpiChron (Aragon, Spain), and SIDIAP (Catalonia, Spain).

- Cumulative incidence of antidepressant initiation was calculated. Initiators were characterized at the start of treatment episode according to age, sex, and presence of comorbidities. Patterns of use, including use of antidepressants before and during the current episode, were also assessed.
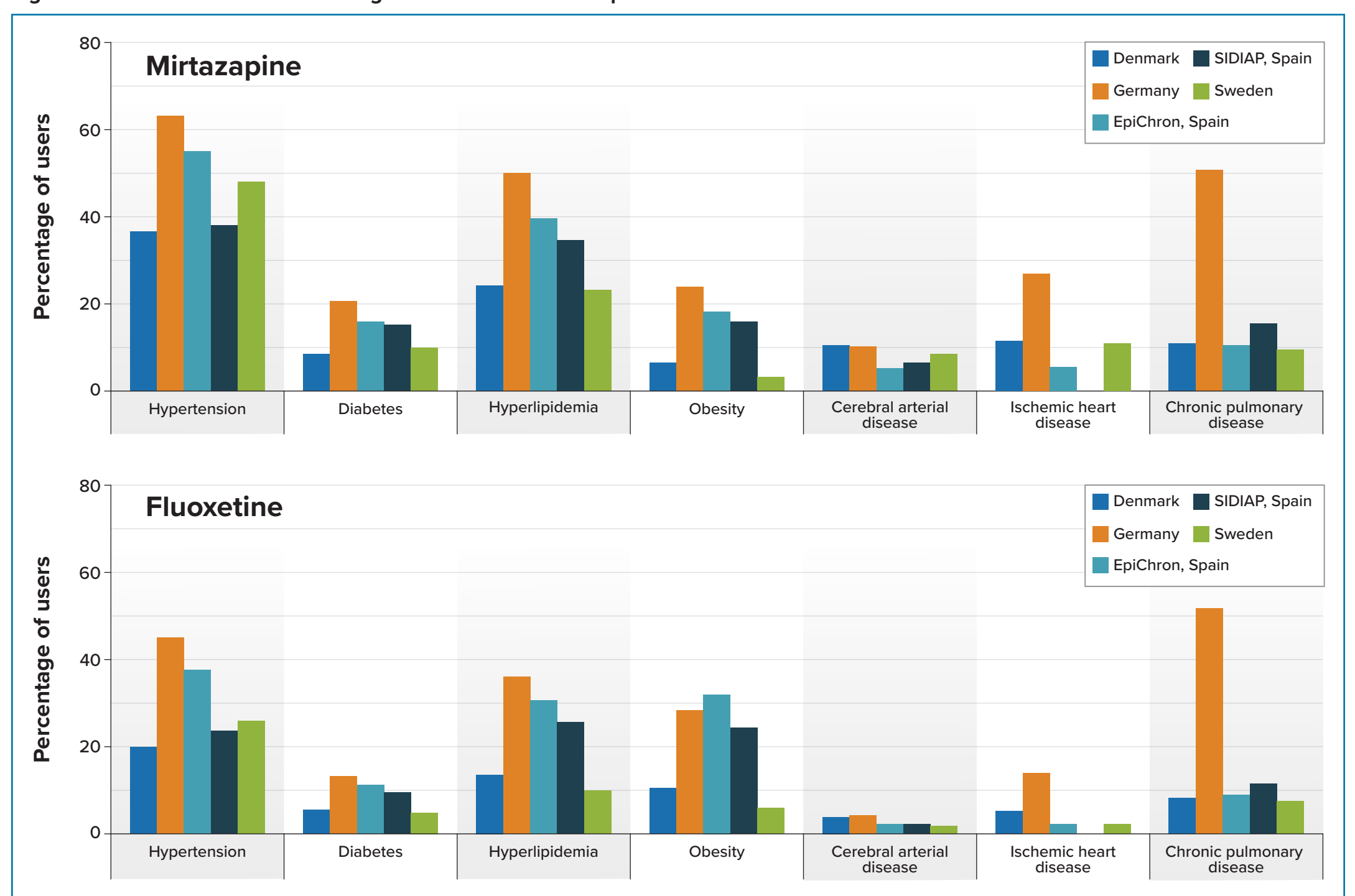
RESULTS

- The study included 4.8 million initiators of antidepressants.

- Citalopram had the highest cumulative incidence (users per 1,000) in all populations except in Aragon, ranging from 65 in Denmark to 38 in Catalonia. Agomelatine (fewer than 10) and paroxetine had the lowest cumulative incidence (Table 1).

- The cumulative incidence for mirtazapine was high in Denmark, Germany, and Sweden.

- Women (> 60%) comprised the majority of antidepressant initiators (data not shown).

- Mirtazapine was used among older initiators (median age range 54 years in Denmark, 67 years in Aragon) with a higher prevalence of comorbidities, and fluoxetine was used among younger and healthier initiators (median age range 38 years in Sweden, 50 years in Aragon) (Figure 1).

- The most prevalent comorbidities among initiators were hypertension, diabetes, hyperlipidemia, and obesity (see Figure 1 for initiators of mirtazapine and fluoxetine).

- The results indicated that citalopram and amitriptyline were the most common first-line treatments, whereas agomelatine and duloxetine were mostly used in the second line (Figure 2).

- Agomelatine, venlafaxine, and duloxetine were mostly used in combination therapy (Figure 2).

Table 1. Cumulative Incidence of Study Antidepressant Initiation at the End of Study Period (Per 1,000 Population)

	Denmark	GePaRD, Germany	EpiChron, Aragon, Spain	SIDIAP, Catalonia, Spain	Sweden
Citalopram	64.5	43.7	9.5	38.0	52.5
Escitalopram	14.5	7.3	47.5	21.1	18.3
Fluoxetine	4.7	6.3	15.5	17.0	10.0
Paroxetine	4.8	4.7	23.8	27.8	4.5
Sertraline	35.0	8.3	11.7	20.1	46.5
Duloxetine	9.5	7.5	21.6	9.7	11.2
Venlafaxine	22.2	13.9	10.9	11.1	16.9
Amitriptyline	10.0	29.2	20.6	24.2	26.4
Mirtazapine	42.5	35.0	21.8	14.5	45.0
Agomelatine	5.6	5.9	9.2	3.0	2.5
Total	**213.3**	**161.8**	**192.0**	**186.5**	**233.8**

Note: The estimated cumulative incidence of study antidepressant initiation at the end of the study period was calculated by dividing the total number of initiators during the study period (2009 to 2013/2014) of each antidepressant by the total reference adult population in each data source at the end of 2013 or 2014 (depending on the end of the study period).

Figure 1. Comorbid Conditions Among Fluoxetine and Mirtazapine Initiators

Note: Only results for new users of mirtazapine and fluoxetine are displayed in this figure. For more information, please review the manuscript here: https://www.sciencedirect.com/science/article/pii/S016503271832398X?via%3Dihub

Figure 2. Proportion of Study Antidepressant Initiators by Antidepressant Treatment in the 12 Months Before Drug Initiation (No Previous Treatment, 1 Antidepressant, 2 or More Antidepressants)

NASSA = noradrenaline and specific serotonergic antidepressant; SNRI = serotonin-norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant.

CONCLUSIONS

- This study suggests that citalopram and mirtazapine were the most commonly prescribed antidepressants in the populations studied during 2009-2014.

- Age, presence of comorbidities, and patterns of use among adult initiators differed between antidepressants.

CONTACT INFORMATION

Joan Forns, MPH, PhD
RTI Health Solutions

Av. Diagonal 605, 9-1
08028, Barcelona, Spain

E-mail: jforns@rti.org

The power of **knowledge.**
The value of **understanding.**

Presented at: 35th International Conference on Pharmacoepidemiology & Therapeutic Risk Management; August 24-28, 2019; Philadelphia, PA