

Age of onset, gender and severity in obsessive-compulsive disorder. A study on a Mexican population

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Summary

At the Mexican Institute of Psychiatry (MIP) in Mexico City, which is a tertiary health care facility, we evaluated the age of onset, gender, severity, and other demographic characteristics in 71 affected patients. In the current study, males had a significantly earlier age of onset than females. Also, a significant negative correlation was found between total symptom severity (Y-BOCS) and age of onset (-0.31 , $p = 0.01$, $n = 61$).

Aggression obsessions were associated with a higher age of onset (29.5 ± 14.3 $n = 9$ vs 21.4 ± 7.7 $n = 59$, $F_{6,56}$, $p = 0.01$) and symmetry obsessions with a lower age of onset (15.1 ± 4.0 $n = 12$ vs 24.1 ± 9.2 $n = 56$, $F_{10,8}$, $p = 0.001$). The compulsion subscale was higher in the presence of contamination and cleaning obsessions; and lower in the presence of aggression obsessions.

Current results are compared with the literature, and future directions of research are suggested.

Key words: Obsessive-compulsive disorder, gender, age-of-onset, severity, Yale-Brown Obsessive-compulsive Scale.

Resumen

En el Instituto Mexicano de Psiquiatría (IMP) de la ciudad de México, que es una institución de atención de tercer nivel, evaluamos la edad de inicio, el género, la severidad y otra serie de características demográficas de un grupo de 71 pacientes con el diagnóstico de trastorno obsesivo-compulsivo. En el presente trabajo los varones presentaron una edad de inicio significativamente más temprana que la de las mujeres.

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De la misma manera, también encontramos una correlación negativa entre la severidad total de los síntomas, la medida por medio de la escala Yale-Brown (versión en español) y la edad de inicio de la enfermedad (-0.31 , $p = 0.01$, $n = 61$).

Las obsesiones de agresión se asociaron con una mayor edad de inicio (29.5 ± 14.3 $n = 9$ vs 21.4 ± 7.7 $n = 59$, $F_{6,56}$, $p = 0.01$) mientras que las obsesiones de simetría con una menor edad de inicio (15.1 ± 4.0 $n = 12$ vs 24.1 ± 9.2 $n = 56$, $F_{10,8}$, $p = 0.001$). La subescala de compulsiones se incrementaba cuando tenían obsesiones de contaminación y limpieza, y disminuía cuando tenían obsesiones de agresión.

Finalmente, los resultados se comparan con los reportados en la bibliografía, y se sugieren algunas medidas que son necesarias para la investigación en este campo.

Palabras clave: Enfermedad obsesivo-compulsiva, género, edad de inicio, severidad, escala de Yale-Brown

Introduction

Obsessive compulsive disorder (OCD) is a chronic illness characterized by recurrent persistent senseless ideas, thoughts, impulses or images that are experienced as intrusive (obsessions) and repetitive purposeful and intentional behaviors that are often performed in response to an obsession (compulsions). The affected individuals usually retain insight, at least initially, of the senseless, excessive, and perverse nature of these thoughts and actions (1, 20). This disorder, which was once thought to be rare, is now known to have a lifetime prevalence of 2 to 3 % (16, 33), and the diagnosis has become more frequent recently (31). Most studies report an equal male:female prevalence ratio (26, 32), although there are reports showing a higher proportion of affected females (16, 32, 33). Symptoms usually begin in early adolescence or early adulthood (3, 6, 14, 15, 27, 34), whereas only some have an age of onset after 40 (2). Besides, an earlier age of onset has been described for males (6, 16, 32).

The Epidemiologic Catchment Area (ECA) Study, a collaborative research project of the National Institute

of Mental Health (NIMH), and five university teams, sampled communities for the prevalence of mental illness using operational diagnostic criteria and reliable survey instruments (9, 16). This study found that most mental disorders affect the young and are chronic, recurring illnesses that last a lifetime. A recent life-table analysis of the age of onset of mental disorders among respondents from the program (5, 6, 30), suggested the importance of onset in adolescence and early adulthood for several specific mental disorders, including OCD.

Most of the studies of OCD have been performed in Caucasians populations, but very few data has been collected in other populations. Ten percent of the individuals assessed by Karmo et al. in the NIMH ECA study (30) had a Latinamerican background, and the majority were Mexican-Americans living in the Los Angeles area. This author performed a logistic regression analysis to estimate the effects of various demographic predictors for OCD. Ethnicity had a significant effect among blacks, who also reported less lifetime OCD. Hispanics also reported less OCD, however, the difference was not significant. In other studies Latins received fewer psychiatric diagnosis than caucasians (10). Burke and coworkers (6), using data obtained from the ECA study, found a median age of onset for OCD of 23 years, with a range of 15 to 39 years, and males had a significantly earlier age of onset than females, with a $p < 0.02$. When comparing age of onset of major depression and other psychiatric disorders, Burke et al.(5), found a younger age of onset for OCD in cohort 1. The peak hazard rate occurs during the age interval of 20 to 24 years, while the peak hazards for cohorts 2 and 3 both occur at the age interval of 24 to 29 years.

Many have reported demographic and clinical features of OCD (15, 26, 28, 33), but few have noted the differential effect of gender on some aspects of OCD and the potential aetiological relevance of this (23). The aetiology of OCD is likely to involve several factors which have varying weights across patients and gender. The difference between early and late onset could reflect the differential operation of two such factors. Some authors suggest that an early onset is a bad prognostic factor (28) and is associated with greater severity of the disorder (8). Holzer et al. (14) studied the phenomenological features of 35 OCD patients with a lifetime history of tics, and of 35 OCD patients without tics. Discriminant function analysis revealed that, compared to their counterparts without tics, OCD patients with tics had more touching, tapping, rubbing, blinking and staring rituals, and fewer cleaning rituals, but did not differ in obsessions. The authors suggest that the types of compulsions present may help to discriminate between two putative subgroups of OCD. Khanna (17) studied the clinical variables between the washer and checker subgroups of OCD. They found that checkers were more likely to be single and male and have an earlier age of onset; if married, the illness was more likely to have started prior to their marriage. Washers were more likely to be female. The mixed group appeared to be a female-dominated pathoplastic variant of the checkers group.

At the Mexican Institute of Psychiatry (MIP), in Mexico City, we evaluated the age of onset, gender, severity,

and other demographic characteristics in 71 affected patients. In the current study we have attempted to investigate clinical and sociodemographic differences between our sample and those previously reported in the literature.

Patients and methods

Patients were recruited from the MIP from September 1990 to November 1994. The Institute is a tertiary health care facility. All out- and inpatients who came voluntarily to the Institute and met a current DSM-III-R criteria for OCD were included in our sample. There were not any pediatric or geriatric subjects included. Diagnoses were confirmed by a clinical psychiatric structured interview, the Diagnostic Interview Schedule (DIS-Spanish version) (7), as well as by a clinical evaluation of an experienced psychiatrist. The DIS has two questions concerning obsessions and three questions about compulsions. For a diagnosis of OCD, the DIS requires either an obsession or a compulsion persisting during three weeks or more despite any attempts to make it stop. The symptom must also have met a set of impairment criteria. Comorbidity was not an exclusion criteria, however, these data is not presented here but has been published before (22).

The clinical evaluation included demographic and disease related variables. Symptom severity was evaluated through the Spanish version of the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) (21), which was administered by a physician to all the subjects included, in the sample.

Y-BOCS has demonstrated to have some advantages over others OCD scales (12, 13). For example, the Y-BOCS evaluates any specific symptoms of OCD, it is sensitive and selective to the severity changes, without being a diagnostic instrument. It is not influenced by the type and number of obsessions and compulsions, and the total rate can be separated into subtotals (obsessions and compulsions).

The most frequent obsessions and compulsions were categorized as follows: a) Obsessions: contamination (ie, ideas of disease transmission at the contact of any object); sexual (ie, the need to look at other people's genitals); aggressive (ie, injuries to relatives); religious (ie, ideas of pecaminous acts); symmetry (ie, chairs must be at the same distance from the table); somatic (ie, intrusive ideas of infectious illness); treasuring (ie, the need to keep the hair from the hairbrush); danger (ie, the feeling that a car might run over him or her); b) Compulsions: checking rituals (ie, check the oven valves), cleaning rituals (ie, hand washing), repeating rituals (ie, jump when a bad thought enters into the mind); ordering rituals (ie, chairs must be at the same distance from the table); counting rituals (ie, count all the wheels of the cars); keeping rituals (ie, keep the hair from the hairbrush); and avoiding rituals (ie, do not touch the things that he or she thinks that are dirty).

Statistical Analysis. Simple ANOVA procedures were performed on continuous variables. The Y-BOCS results were log transformed to achieve normality. Chisquare analysis with Yates corrections were per-

formed on categorical data as needed. The significance level was established at 0.05, but some tendencies are reported at levels $< .10$. Continuous variables were related using the Pearson's product-moment correlation test. Clinical data were missing in a few patients, either because of refusal to answer or evaluator mistake. The number of patients is specified in each analysis.

Results

A total of 71 patients fulfilled the OCD criteria from a total psychiatric population of 3 086 patients evaluated at the Institute (2.3 %) during a 51 month period. Mean age was 32.3 ± 11 years (range 16 to 65), 26(37 %) were males and 45(63 %) females. The mean school level in years was 10.8 ± 4.2 .

Mean age of onset was 22.6 ± 9.1 years (range of 7 to 61), determined by the patient's self report. Males had a significantly earlier age of onset than females (table 1). Average illness duration was 9.4 ± 9.1 years, reported from the value of the "age of onset" until the value of the "age at assessment" (range 1 to 39).

TABLE 1
Age and age of onset of OCD probands

	<i>n</i>	<i>Age</i>	<i>n</i>	<i>Age of onset</i>
Men	26	29.8 ± 2.1	25	$19.7 \pm 1.7^*$
Women	45	33.7 ± 1.6	44	24.0 ± 1.4

* (t 6.01, df 1, $p = 0.01$).

Total mean symptom severity measured by Y-BOCS was 26.3 ± 8.3 (range 10 to 40). Mean obsessive symptom severity was 13.7 ± 4.0 and compulsive symptom was 12.6 ± 5.2 . No statistical differences were found between sexes.

A significant negative correlation was found between total symptom severity (Y-BOCS) and age of onset (-0.31 , $p = 0.01$, $n = 61$). The negative correlation was higher in the compulsion subscale ($r = -0.37$, $p = 0.003$, $n = 61$) than in the obsession subscale, where significance was not reached ($r = -0.18$, $p = 0.16$, $n = 61$).

Table 2 shows the general distribution of obsessions and compulsions found in our population, using the classification described previously.

TABLE 2
General distribution of obsessions and compulsions in a sample of 71 OCD patients

<i>Obsessions</i>	<i>n</i>	<i>(%)</i>	<i>Compulsions</i>	<i>n</i>	<i>(%)</i>
Contamination	41	(58)	Clean	44	(62)
Sexual	22	(31)	Check	18	(25)
Agression	9	(13)	Order	15	(21)
Religious	5	(7)	Repeat	12	(17)
Symetry	12	(17)	Count	4	(6)
Somatic	2	(3)	Avoid	24	(34)
Treasure	2	(3)			
Danger	10	(14)			

The addition is not equal to 100 % since some patients presented more than one obsession or compulsion.

The presence of two obsessions was significantly associated with the age of onset of the OCD: Agression obsessions were associated with a higher age of onset (29.5 ± 14.3 $n = 9$ vs 21.4 ± 7.7 $n = 59$, F 6.56, $p = 0.01$); and symetry obsessions with a lower age of onset (15.1 ± 4.0 $n = 12$ vs 24.1 ± 9.2 $n = 56$, F 10.8, $p = 0.001$).

The compulsion subscale showed significant differences between the presence of contamination obsessions (13.4 ± 4.4 $n = 40$ vs 10.2 ± 6.0 $n = 20$, df 58, f 5.4, $p < 0.05$); aggression obsessions (9.0 ± 5.8 $n = 8$ vs 12.8 ± 4.9 $n = 52$, F 3.9, $p = 0.05$); and cleaning obsessions (13.5 ± 4.5 $n = 43$ vs 9.2 ± 5.6 $n = 17$, F 9.2, $p = 0.003$).

Discussion

The results of this study can be summarized as follows: the proportion of patients with OCD evaluated at the MIP was 2.3 % from a total of 3 086. Mean age at onset (in years) was reasonably consistent across other studies (19.7–24.0). It is interesting to notice the low proportion of males ascertained, since previous studies have reported that OCD affects equally males and females (16,26, 32). This finding could be due to a cultural phenomena in which the Mexican male tends to deny his mental illness (25).

Age of onset results corresponded to those previously reported in the bibliography (22.6 ± 9.1 years) (7, 8, 9), and men presented an earlier age of onset as previously suggested (3, 4, 5). Males ($n = 26$) had an age-onset of 19.7. Rasmussen and Eisen (27) found in their cohort a mean age of onset of 20.9 ± 9.6 with males having a significantly earlier onset of illness: 19.5 ± 9.2 for males, 22.0 ± 9.8 for females. Sixty five percent of the 514 patients developed their illness prior to the age of 25 years, and less than 15 % developed the illness after the age of 35 years. Bellodi et al. (4) found the same results.

A hitherto finding in our sample was that more men had an onset of OCD during early adulthood and far more women had a later onset. In a recent study of 305 OCD probands (23), men were found to have a significantly longer duration of illness compared to women. The rate of men with early onset suggests that perhaps early and late onset cases have a different or more severe disorder than later onsets, akin to the more severe early-onset form of schizophrenia often seen in men (11, 19).

The early-onset cases might reflect the influence of brain damage or some other constitutional deficiency to which men are more vulnerable than women. There is a significant male preponderance for a number of disorders such as conduct disorder, autism and Tourette syndrome, which some assume arise out of central nervous system disturbances that are genetically influenced (11).

In Gilles de la Tourette syndrome, the frequency of OC symptoms and the male preponderance (18, 24) may indicate an extreme form of early-onset of OCD.

Conclusions

The present study is limited because there were not enough clinical, treatment, and follow up data to better describe the sample. However, we found an earlier onset in males, and a higher severity of the disorder depending upon the age of onset. Also, specific subtypes of obsessions were related to age of onset as well.

Further studies are required to focus on biological correlates, such as molecular genotypes, animal

models, sleep patterns, neuroendocrine and neurochemistry challenges, and prediction of pharmacological response. Also, variables such as the clinical course and the outcome would be very much influenced by personality. Novel personality paradigms, particularly those where the temperament has been highly correlated with biological variables.

All of the above mentioned areas will have an important impact in leading the future directions of research in OCD.

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