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ORIGINAL ARTICLE

Multiple sclerosis and pregnancy: A single-centre prospective comparative study☆,☆☆

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KEYWORDS
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Abstract
Introduction: Multiple sclerosis (MS) is a autoimmune disorder which preferentially affects young women of childbearing age. During pregnancy, the annualised relapse rate (AAR) is modified, but pregnancy has no harm effect on the long-term course of the disease. We aimed to study the clinical course of our MS patients during pregnancy, and compare their obstetrics outcomes with a control group of non-MS patients.
Methods: A single centre prospective observational study was conducted. We assessed the reproductive history, MS history, pregnancy course and new-born outcome of a cohort of MS patients who had had a pregnancy between January 2007 and July 2012. We compared the global outcomes with a control cohort of 58 age-matched healthy pregnancies.
Results: Complete data from 35 consecutive women were analysed, 40 deliveries. Control groups: 58 patients, 60 deliveries. EDSS at pregnancy 0.7. ARR before pregnancy 0.5. During pregnancy 0.3, after pregnancy 0.4. Twelve patients were on disease-modifying drugs (DMD) before pregnancy, 4 prenatal exposure occurs. The comparison between relapse rate and EDSS before, during and after delivery showed no statistically significant difference. In addition, compared to control group, there were also no differences in the obstetric outcomes. In MS cohort, we found a higher incidence of assisted reproductive treatments and lower breastfeeding rate, both statistically significant.
Conclusions: Our series confirms that pregnancy has no negative long term impact on the progression of MS and also suggest that there is no additional morbidity in the pregnancy, comparing to the rest of the population.

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PALABRAS CLAVE
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Esclerosis múltiple y embarazo: estudio unicéntrico prospectivo y comparativo

Resumen
Introducción: La esclerosis múltiple (EM) es una enfermedad autoinmune que afecta preferentemente a mujeres en edad fértil. Durante el embarazo y puerperio, cambia la tasa anual de brotes (TAB) de EM, sin modificar la evolución a largo plazo. Analizamos la repercusión del embarazo en pacientes con EM, y comparamos sus resultados obstétricos con embarazos de mujeres sanas.
Métodos: Estudio unicéntrico, observacional descriptivo, de diseño longitudinal prospectivo. Se analizan los datos globales de una cohorte de pacientes con EM que han dado a luz entre enero de 2007 y julio de 2012, con un seguimiento de 2 años posparto. Los resultados obstétricos se compararon con un grupo control de 58 embarazadas sanas, elegidas al azar de nuestro centro durante el mismo período de tiempo.
Resultados: Un total de 35 pacientes con EM, 40 partos. Grupo control: 58 mujeres, 60 partos. EDSS preembarazo: 0,7. TAB 2 años preembarazo: 0,5. Durante el embarazo: 0,3, a los 2 años posparto: 0,4. Doce pacientes recibían FME previo al embarazo, 4 iniciaron la gestación con FME. No hubo diferencias estadísticamente significativas en la TAB ni en la EDSS entre períodos preembarazo, embarazo y posparto. Al comparar con grupo control, no hubo diferencias en edad materna, semanas de gestación, peso al nacer, porcentaje de cesáreas, ni complicaciones obstétricas. En pacientes con EM hubo mayor porcentaje de tratamientos por infertilidad y menor porcentaje de lactancia, ambos estadísticamente significativos.
Conclusiones: Nuestro trabajo confirma que el embarazo no repercute negativamente en el curso de la EM y que no existe mayor morbilidad obstétrica comparado con mujeres sanas.

Introduction

Multiple sclerosis (MS) is a chronic autoimmune disease of the central nervous system that predominantly affects women of childbearing potential.[1] Susceptibility to MS is thought to depend on environmental factors in individuals with a genetic risk profile.[2–6]

Pregnancy in a woman with MS will change her annual relapse rate (ARR), with relapses becoming less frequent during the third trimester and subsequently increasing during the first 3 months postpartum.[7] In the long term, the ARR and global disability do not seem to be affected by the changes in relapse frequency occurring in pregnancy. Regarding other parameters frequently analysed in pregnant MS patients or newborns of women with MS (duration of the gestational period, percentage of caesarean sections, birth weight, incidence of obstetric complications, etc.), results in the literature are not always comparable and may even be contradictory.[8]

There is currently no international consensus on how to manage MS patients planning to conceive; clinical recommendations vary between countries. Pregnancy planning and satisfactory management of MS are essential for these patients. Disease-modifying drugs (DMD) are not recommended during pregnancy since there is little knowledge of the effects they may have on the fetus.[1] However, involuntary prenatal exposure to DMDs is relatively frequent, especially in cases of unplanned pregnancy, meaning that the body of evidence is growing.[9,10]

Our purpose was to analyse clinical experiences with managing female patients with MS during pregnancy and compare gynaecological and obstetric outcomes in these patients to those of healthy pregnant women at our hospital.

Material and methods

We conducted a prospective descriptive longitudinal study at Hospital General Universitario Gregorio Marañón (HGUGM). HGUGM is a public hospital in the Madrid healthcare area; it has 1671 beds and serves a population of 317 940 inhabitants.[11] We analysed global data from a cohort of female patients diagnosed with MS who gave birth between January 2007 and July 2012. MS diagnosis was based on the McDonald criteria and the 2010 revisions to these criteria, depending on the date of diagnosis.[12]

All patients were prospectively evaluated at our department once pregnancy was confirmed and patients had agreed to participate in the study. We analysed the different clinical variables according to standard procedures. Assessments were conducted every 3 months during pregnancy and every 6 months after labour until the 2-year mark.

The study of MS patients gathered the following data: age, reproductive history, clinical form of MS, disease progression in years, ARR from disease onset, degree of disability according to the Kurtzke EDSS, and history of pharmacological treatment.[13] We used baseline data from our cohort of patients with MS to compare the number of relapses and level of disability before, during, and after pregnancy. The appearance, reappearance, or worsening of