



# Pregnancy planning and outcome in MS patients after Mitoxantrone therapy.

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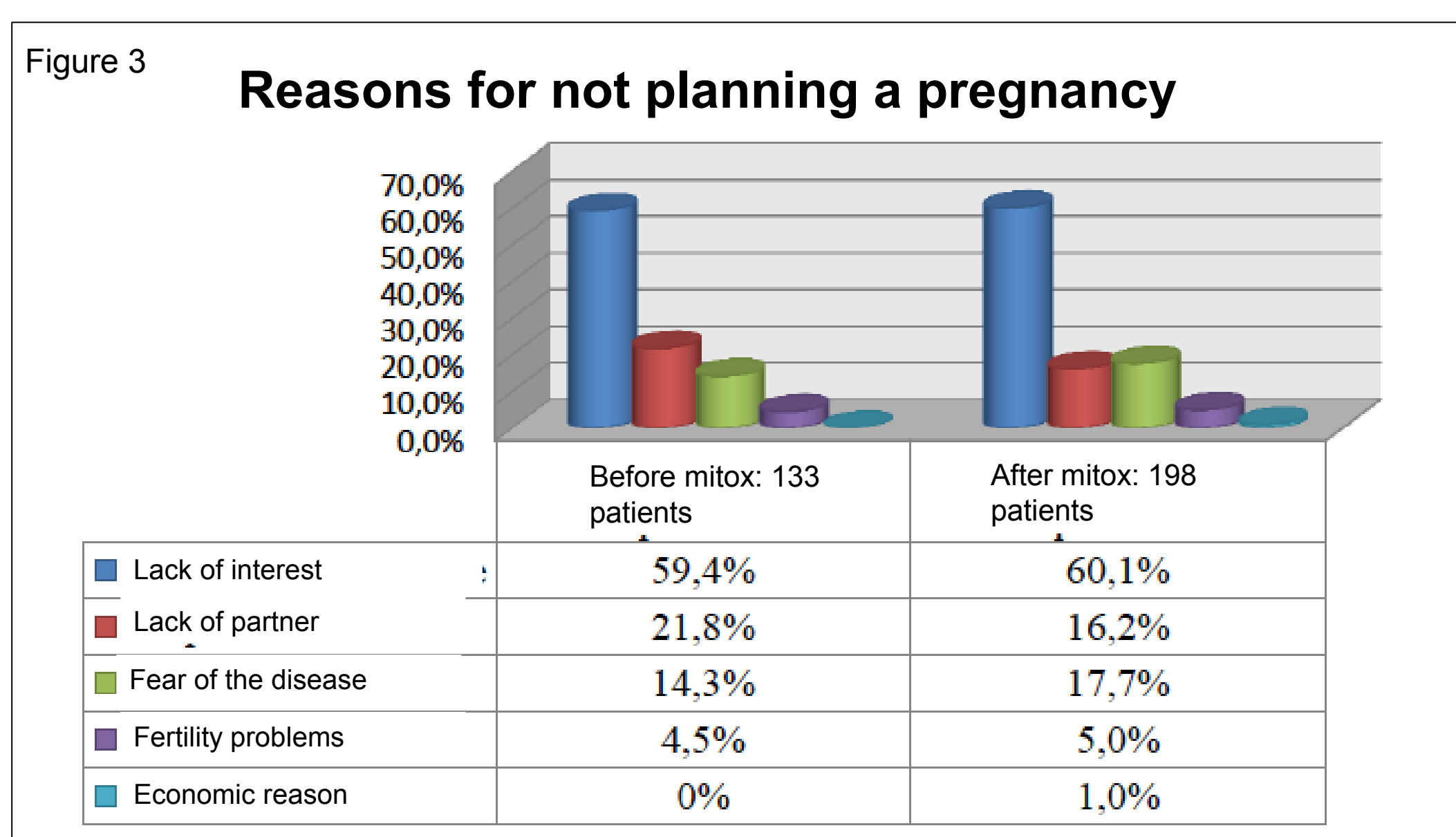
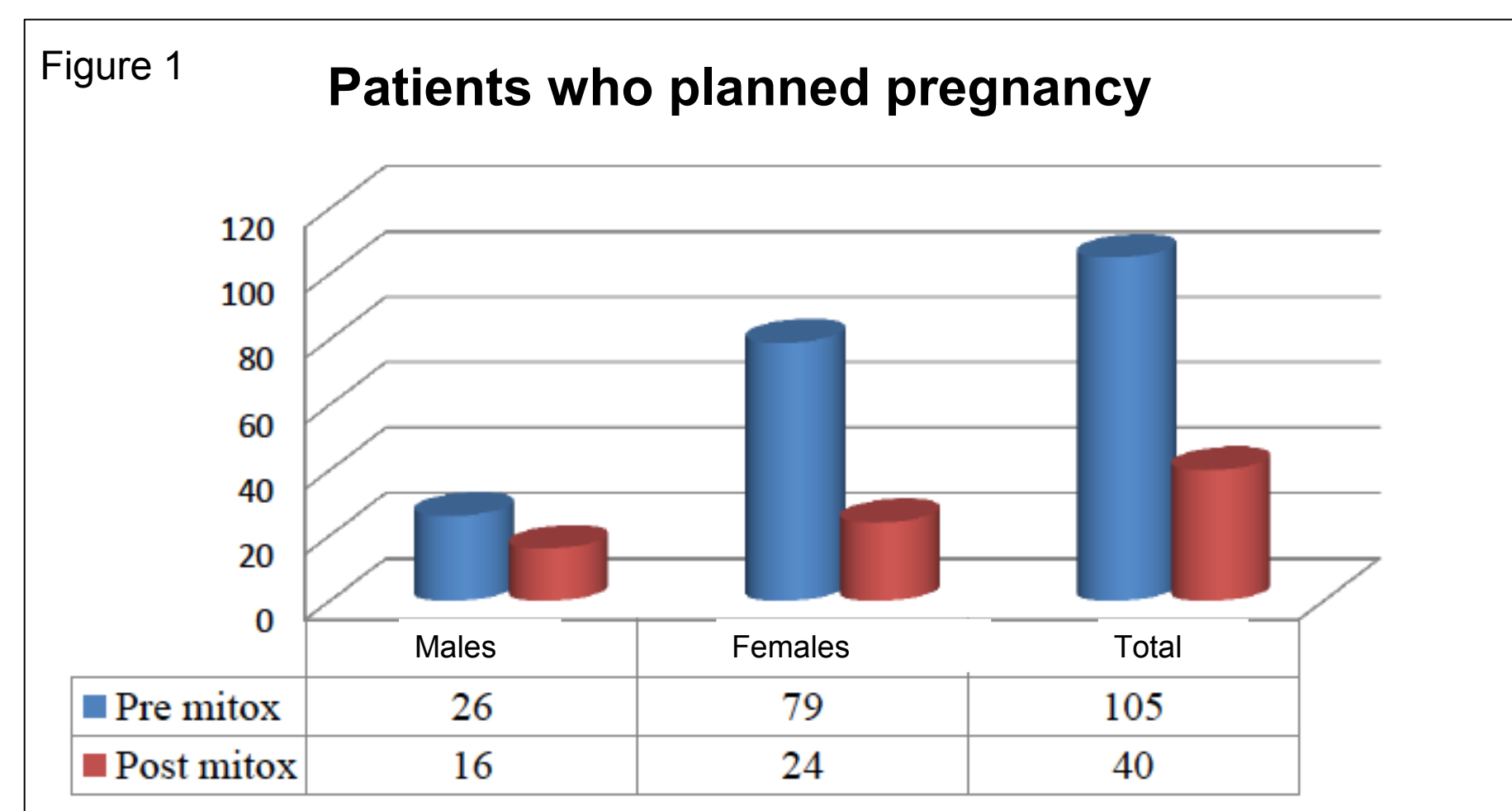
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**Background.** Multiple sclerosis (MS) does not affect the possibility to be pregnant, but persons with MS often have many pregnancy-related doubts and fears, and a careful counselling with a neurologist expert in MS is important. Mitoxantrone (MITO) is a treatment used in patients with very aggressive course of the disease and may affect reproductive capacity in women, in particular if administered at older age. Our study aimed to investigate the pregnancy planning and outcome in a group of MS patients who underwent to MITO therapy, both before and after this treatment.

**Methods.** Patients with MS diagnosis and MITO therapy in clinical history were recruited. Clinical, demographic data and treatments history were recorded. A telephonic questionnaire about the planning and outcome of pregnancies before and after MITO, including abortions and long-term follow-up of the offspring, was administered. Parametric and non-parametric tests were performed by SPSS 22 software.

## Results

We included 238 subjects (F/M=158/80; mean age at onset 27 years-old, mean age at the enrolment 45 years-old). One-hundred-five subjects planned a pregnancy before MITO and 40 after. (Figure 1) Out of them, respectively 102 (97%) and 35 (85%) had at least one natural conception, 19 (19%) and 7 (18%) at least one abortion, 6 (6%) and 1 (3%) at least one voluntary interruption, and 98 (96%) and 32 (91%) at least one at term pregnancy. One female patient started the pregnancy during MITO, after 6 infusions, and delivered a healthy baby. The patients who planned a pregnancy only before MITO were 96 (40%), while only after 30 (13%),  $p < 0.01$ . (Figure 2) All of the babies were health at the birth and at the end of follow-up. The reasons for not planning a pregnancy are indicated in the figure 3.



## Conclusions

In our study MITO does affect neither the possibility to conceive, nor the pregnancy outcome. No differences in a term pregnancies, abortions and voluntary interruptions were showed among the period before and after MITO. Nevertheless, the attitude of patients in pregnancy planning is different before and after the treatment. In fact, a large quote of patients stop to plan a pregnancy after MITO, and in more than 25% of them the reason was disease-related.