Women's Health Care

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Incidence of Menstrual Disorders is Not Influenced by Nulliparity

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Abstract

Background: Nulliparity is a condition that has been associated with some oncological gynecological diseases. Since religious community is a realistic example of nulliparous women, the present study aims to evidence if nulliparity is a risk factor for developing menstrual disorders and benign gynecological diseases.

Materials and Methods: The present observational retrospective study enrolled 442 women divided in Group A (n=216; Catholic nuns) and Group B (n=226; parous women). All eligible women filled in standardized questionnaires, to obtain data on physiological and pathological aspects of menstrual cycle and related gynecological data. Statistical analysis was performed using univariate statistical analyses, Mann-Whitney *U* test or Fisher exact test. P<0.05 was considered statistically significant.

Results: The results showed that nulliparity is not correlated with a different incidence of menstrual cycle disorders (in term of length or bleeding), or gynecological disorders (ovarian or uterine). Dysmenorrhea is more common in pluriparous women, with a higher use of painkillers in nulliparous women.

Conclusion: Therefore, the present study suggests that nulliparity does not represent a risk factor for the development of menstrual irregularity and painful symptomatology, compared with pluriparous women.

Keywords: Woman's health; Nulliparity; Menstrual disorders

Abbreviations: BMI: Body Mass Index; SD: Standard deviation; OCs: Oral Contraceptives; RR: Relative Risk

Introduction

A life course view of women's health offers a more unified and woman-centred approach to health promotion, disease prevention and management, with implications for long-term, cross-generational health gain. This perspective highlights the potential for early intervention to reduce disease risk or severity, ensuring that primary care clinicians are alert to the reproductive histories of their patients [1].

Nulliparity is a condition that has been associated with the development of some oncological gynecological diseases. Cancer mortality rates in Catholic nuns (breast, ovarian and uterine) is higher than in general population [2-4], and nulliparous women appear more susceptible to these three cancers, as compared to parous women, thus suggesting that pregnancy represents a 'protected' time [5,6]. It is suggested that in nulliparous women, the increased number of cycles between menarche and menopause expose to an increased risk of hormone-dependent cancers. The association between nulliparity and other benign gynecological disorders, like an increased risk of endometriosis [7], and uterine fibroids [8], is still under discussion.

Considering religious community a good model of an urban nulliparous women group living in a low stress environment, the present study aimed whether nulliparous women are more predisposed to the development of menstrual disorders and related gynecological diseases.

Materials and Methods

For the present study, a group of women, (8n=442; range 35-81 years old) were enrolled from August 2010 to April 2011. An observational retrospective study was as follow:

- Group A (n=216): Catholic nuns (enrolled in religious institutes at Siena and Rome-Italy);
- Group B (n=226): Parous women (recruited among university or hospital staff members at Siena-Italy).

Exclusion criteria were only the current state of pregnancy.

When enrolled, at all women eligible for the study, a standardized questionnaire was administered by a trained interviewer. The following patients' characteristics were reported: age, nationality, height, weight, BMI, age at menarche, parity, menstrual cycle length (during adolescence, between 25 and 40 years of age, and after 40 years of age), menstrual bleeding, dysmenorrhea, administration of analgesic during the period, past surgery for ovarian cysts or myomas, previous ultrasound assessments, age at menopause and type of menopause (spontaneous or iatrogenic) (Table 1). The diagnosis of gynecological diseases was supported by reported diagnostic procedure.

Statistical analysis was performed using Graph Pad Prism 5 (San Diego California USA, and www.graphpad.com). Subject characteristics were compared in univariate statistical analyses to describe the study population. Frequencies and proportions of categorical variables were compared using Mann-Whitney *U* test or Fisher exact test, where appropriate. The results are reported as mean SD, or as percentages where appropriate P<0.05 was considered statistically significant.

Results

All participants completely answered the questionnaire and no

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