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Continuation Rates and Reasons for Discontinuing TCu380A IUD Use in Sari, Iran

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Abstract: This study reports results from a 60-month study on the use of TCu380A IUD among 400 women in Sari, Iran. The aim of this study was to assess a sample of women in our region who requested removal of their IUD, continuation rates use and reason for discontinuation. This is a cohort study on 400 women who using the TCu380A IUD and referred to medical health centers of Sari/Iran from May 1999 to May 2006. We randomly selected one half of all health and medical centers in Sari (a total of 20 centers). At each selected center, we randomly sampled 10% of all IUD subjects whose insertion occurred between May 1999 and May 2006. Obtained data were analyzed by descriptive statistical methods. Continuation rates at the end of 1, 2, 3, 4 and 5 years were 96.3, 81.5, 79.2 and 18 per 100, respectively. Median survival time was about 37 months. Among women using the TCu380A IUD, the rate of termination due to bleeding was significantly higher than the rate of termination due to other causes. These findings indicate that family planning educators and health care providers should give more emphasis to counseling programs for women desiring IUD insertion and during follow-up.

Key words: Intrauterine device, continuation rate, discontinuation reasons, TCu380A IUD, Iran

INTRODUCTION

Intrauterine device (IUD) is a popular and tested method of contraception (Thonneau *et al.*, 2001) with nearly 160 million users; the IUD is the second most popular contraceptive method worldwide after sterilization (World Health Organization, 2002). According to a study in 1999, the prevalence rates of IUD users in Iran and in Mazandaran Northern Province of Iran were 8.5 and 12.5 per 100 women, respectively. Using TCu380A IUD is somewhat more popular in Mazandaran province than in other parts of Iran do (Ministry of Health Medical Education, 2000). There are a variety of modern IUDs in many shapes and sizes that are available to women in developing countries. To date, the most effective and longest tested IUD is copper TCu380A (Salazar-Martinez *et al.*, 1999). Intrauterine contraception provides convenient, cost-effective and intermediate- to long-term pregnancy protection with few systemic side effects (Grubb, 1987). Although, intrauterine contraceptive is the most frequently worldwide method of reversible female contraception, its application varies considerably in different countries (Berry *et al.*, 2003). A recent review on copper IUDs found that in comparative studies (in mostly parous women) the CuT380A was superior to other devices in terms of contraceptive

efficacy and not clearly superior in terms of expulsions and removals due to bleeding and pain (Kulier *et al.*, 2006). However, little information is available regarding to compliance with prescriptions or rates of continuation of modern contraceptive methods in Iran. Present aim in this study was to assess a sample of women in our region who requested removal of their IUD, continuation rates use, reason for discontinuation and problems encountered during removal of the device.

MATERIALS AND METHODS

The study population comprised 400 women who had TCu380A IUD insertion from May 1999 to May 2006 and referred to the medical health centers of Sari/Iran. We randomly selected one half of all health and medical centers in Sari (a total of 20 sample centers). At each selected center, we randomly sampled 10% of all IUD subjects whose insertion occurred between the dates. We designed a questionnaire and attempted to interview all selected subjects. Data collection was included finding and interviewing of each woman taken 2 months. Descriptive statistical analysis was used to describe the principal characteristics of the studied group. Mean values was calculated.

RESULTS AND DISCUSSION

Totally, 400 women contributed necessary data. At the time of IUD insertion, the mean age of the interviewed subjects was 28±6.59 years, ranging from 17 to 48 years. The modal age group of subjects in the study comprised women who were <25 years (34.2%). The majority of women had not attended high school. At the time of IUD insertion, the great majority of subjects had fewer than three children. All women (100%) had at least one child at the time of IUD insertion. The study group consisted of 76.8% of women with no prior record of IUD use (Table 1). A total of 64.6% of the women reported that they had no Pap smear test during the 3 years preceding the study.

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At the end of 5 years, the highest removal rate was for bleeding (16.3/100). Other major reasons for Removal were Expulsion (4.7/100), pelvic inflammatory disease (PID; 8.1/100) and desire for Pregnancy (5.7/100), pain (3.2/100).

The IUD is the most widely used modern contraceptive method available in Iran and it is preferred by 8.5% of Iranian women who use contraceptives (Ministry of Health Medical Education, 2000). In the present study, 96% of the women were still using the IUD one year after insertion. These findings were similar to those reported by Rivera and Best (2002). Whereas Meirik *et al.* (2001) reported a continuation rate of 69.5 per 100 at 5 years of IUD use. The longer duration of use possibly related to better counseling and education on IUD use. Complications and complaints reported during the follow-up period were mostly related to bleeding (16.3/100), in accordance with the findings of other studies (Mishell, 1998; Rosenberg *et al.*, 1996; Rivera and Best, 2002; Sheppard, 1988). The percentage of IUD discontinuation due to expulsion during the first year of use was 4.7/100. This rate is similar to those found in other studies (Trieman *et al.*, 1995;

Bonacho and Best, 2002; Farr *et al.*, 1988). The result of the present study also showed that this birth control method had high efficacy. In the present study, as well as in many other studies, lower continuation rates were found among women who wished to have more children. These women were particularly those who were younger and had fewer children. Women who did not finish high school had slightly higher continuation rates than women who had completed high school, but the differences were not significant. Women who had previously used an IUD had lower continuation rates because of spotting and hemorrhage than did women without previous IUD experience. Among contraceptive methods that are known to be highly effective when used, the duration of use is an extremely important factor in preventing pregnancy. The increase in bleeding is the main reason for premature discontinuation of IUD use. It may be necessary to use other types of IUD that result in less pain and bleeding for those women who request removal of the IUD due to increased bleeding but have a desire to use an IUD again. Women who wish to avoid pregnancy for a long period but who do not want to be sterilized remain ideal candidates for IUD use with its high efficacy and 10-year life span.

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Table 1: Characteristics of IUD users (n= 400)

Variables	(%)	Mean±SD
Age (years)		
<25	10.5	32.6.2±4.13
25-29	26.4	
30-34	37.2	
≥35	16.9	
Education		
Less than high school	70.1	
High school or higher	29.9	
Number of children alive		
1	08.6	2.28±0.65
2	57.4	
≥3	34.0	

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