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Spontaneous upward movement of lowly placed T-shaped IUDs

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Abstract

Objective: To assess the possible progression of intrauterine devices (IUDs) to a lower or upper position in women.
Material and Methods: Thirty-two lowly placed T-shaped IUDs in women with 0–3 children were examined with transvaginal ultrasonography after 2 months of insertion in order to assess the possible progression of the IUDs. Also, the IUDs inserted in women with 0–3, 0–1 and 2–3 children were compared to determine whether this progression was different depending on parity.
Results: Intrauterine devices (97%, 100% and 93.7%) in the group of women with 0–3, 0–1 and 2–3 children, respectively, moved upward. The mean decrease in IUD–fundus distance was 6.8, 7.4 and 4.9 mm, respectively.
Conclusion: Lowly inserted T-shaped IUDs tend to move upward after insertion. Therefore, initial concern about low placement of a T-shaped IUD is not justified as most of them spontaneously readjust their position.

Keywords: IUD movement; IUD expulsion; IUD readjustment; Ultrasound; IUD efficacy

1. Introduction

Expulsion of an intrauterine device (IUD) is rare but has been described to be more frequent in cases of abnormally low insertion, implicating a decrease of contraceptive effectiveness and a risk of undesired gestation [1,2]. Awareness of this has made gynecologists remove lowly inserted IUDs and replace them with another IUD with the consequent increased cost for the health care system or the patient.

In this study, 32 lowly inserted IUDs were followed in order to assess whether concern about expulsion with lowly inserted IUDs is justified.

2. Material and methods

Thirty-two lowly inserted T-shaped IUDs placed in 32 women between 23 and 45 years old [mean 29.9, standard deviation (SD) 4.3] and with 0–3 children (mean 1.5, SD 0.7) were followed with ultrasound for 2–3 months.

All IUDs were T shaped and only two commercial types with very similar shapes were used (Nova-T®, Schering, Germany; Effi-T 380®, Effik, France). Low insertion was asymptomatic in all women and was considered to occur when IUD–fundus distance was equal to or more than 20 mm [3]. The first ultrasound was performed just after insertion and the second between 2 and 3 months afterward.

For study purposes, three groups of IUDs were compared: those inserted in women with 0–3, 0–1 and 2–3 children. The

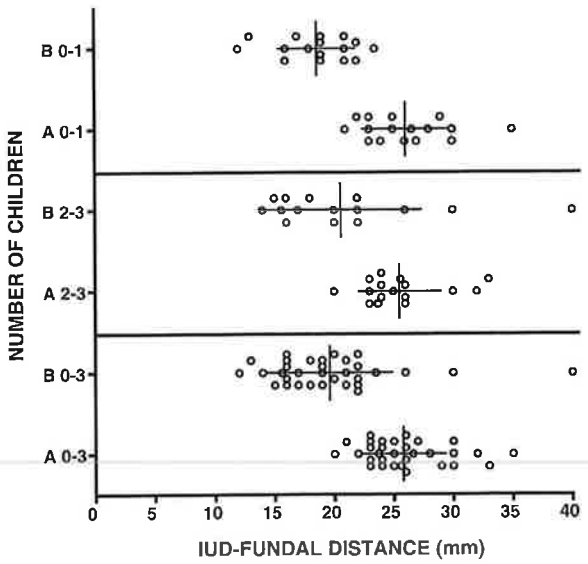

Fig. 1. IUD–fundus distance and SD (mm) at insertion (A) and after 2–3 months (B) in the three groups of women with 0–3, 0–1 and 2–3 children.

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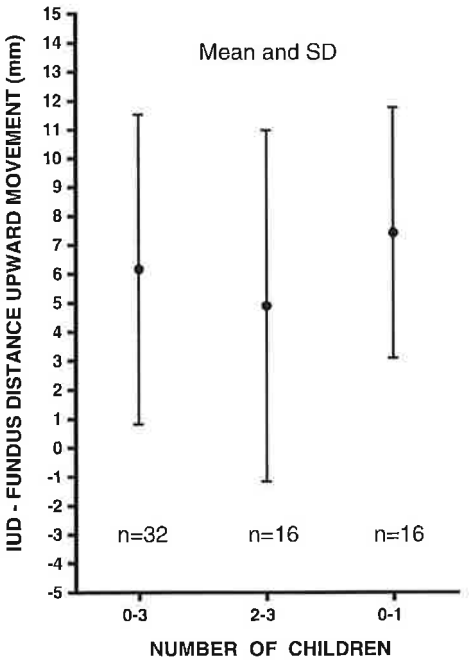

Fig. 2. Mean upward movement and SD (mm) in lowly inserted IUDs placed in women with 0–3, 0–1 and 2–3 children.

differences in IUD–fundus distance were calculated for every IUD, and mean and SD were obtained for every group studied. A χ^2 test was applied to assess statistical significance among groups. Statistical analysis and graphics were performed with the software GraphPad Prism® (GraphPad Software®, San Diego, CA, USA) for Apple Macintosh® OS-X (Apple Computer, Cupertino, CA, USA).

3. Results

The results are graphically shown in Figs. 1 and 2. Fig. 1 shows the scattering (with the mean and SD) of the IUD–fundus distance at insertion and 2–3 months afterward in the three groups studied. There is a clear sliding to the left (less distance) in the three groups, which indicates an upward movement of most IUDs. Fig. 2 depicts the mean and SD of the positive IUD–fundus distance change in all groups studied (always between 4 and 8 mm).

In women with 0–3 children ($n=32$), 97% (31) of IUDs moved upward, and only 3% (1) moved downward but without expulsion. The mean distance of IUD–fundus movement was 6.2 mm (SD 5.3 mm) (range −14 to 17 mm).

In women with 0–1 child ($n=16$), 100% of IUDs moved upward. The mean upward movement was 7.4 mm (SD 4.3 mm) (range 0–17 mm).

Finally, in women with 2–3 children ($n=16$), 93.7% (15) of the IUDs moved upward, and only 6.3% (1) moved downward in the absence of expulsion. The mean upward movement was 4.9 mm (SD 6.1 mm) (range −14 to 16 mm). Upward movement, therefore, seemed to be more frequent in women with less children ($p>.05$).

4. Discussion

Intrauterine device expulsion is more frequent in cases of abnormally low insertion [1,2]. Other factors influencing expulsion are intensity of menstruation, age (higher in young women), and dysmenorrhea [3].

There is concern among gynecologists about the consequences of lowly placed IUDs because malposition and expulsion may decrease IUD effectiveness; therefore, when an IUD is detected to be low in the uterine cavity, it is replaced, resulting in increased cost for the patient or the health care system.

In a previous study, Faundes et al. [4] studied 17 IUDs considered misplaced after insertion. Of them, 66% readjusted their position after 3 months. Interestingly, they also studied 21 IUDs found to be misplaced after 3 months of insertion, when only 33% of them had been considered misplaced just after insertion.

In the present study, with nearly double the number of cases, it is concluded that 97% of lowly placed IUDs moved upward after 2–3 months. This change in the IUD–fundus distance cannot be justified by endometrial growth or involution [5] and is most probably explained by myometrial contractility acting especially during the menstrual period. Also, this upward change was found to occur more frequently in women with less children (although without statistical significance). A possible explanation is that myometrial contractions occur in a more intense manner in women with an intact myometrium such as nulliparous women. A less damaged myometrium is more able to raise an IUD by means of uterine contractions acting on its transverse arms.

Lowly inserted T-shaped IUDs must always be followed-up, but according to the results of this study, gynecologists should not be initially worried, because most of the IUDs (97%) automatically readjust their position. An ultrasound examination performed 2–3 months after insertion is adequate to select the few IUDs that must be replaced.

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