

THE USE OF ULTRASOUNDS IN REAL TIME IN THE LOCALIZATION OF INTRAUTERINE CONTRACEPTIVE DEVICES *

EVIDENZIAMENTO MEDIANTE ULTRASUONOOGRAFIA IN TEMPO REALE DI DISPOSITIVI CONTRACCETTIVI INTRAUTERINI CRIPTORITENUTI

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SUMMARY

Nine patients fitted with intrauterine contraceptive devices whose marks were not visible, were examined by ultrasonic technique in real time. In three cases the IUD had been expelled; in six cases the IUD was present within the uterine cavity (in one of these cases the IUD was detected in association with intrauterine pregnancy in the eighth week).

The Authors analyze the advantages of ultrasonic technique in real time, compared to the other methods used in the localization of « missing » IUDs.

RIASSUNTO

Sono state esaminate con ultrasuoni in « tempo reale » nove pazienti che presentavano scomparsa del filamento « marker » del dispositivo contraccettivo intrauterino (DCI). Si è riscontrato: in tre casi espulsione del DCI; in sei casi ritenzione del DCI (in un caso associata a gravidanza all'ottava settimana).

Gli autori analizzano i vantaggi della ecografia in « tempo reale » rispetto alle metodiche tradizionalmente usate per la localizzazione dei DCI ritenuti.

INTRODUCTION

The disappearance of « markers » from the external uterine orifice has been occasionally observed when using Intrauterine Contraceptive Devices. This can depend:

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1) on the expulsion of the IUD from the uterine cavity, with a rate ranging from 5% to 25% (5,8).

2) on the withdrawing of the « marker », which can happen:

- a) because of the perforation of the uterine walls in 0,5-8,7% cases (4,6,9).
- b) because of the « marker » being too short.
- c) because of the shifting of the IUD.
- d) because of an enlargement of the uterine cavity caused by pregnancy or other diseases.

Several methods have been used in the localization of missing IUDs: pelvis X-ray photographs, Isterosalpingography (2), Belocator and Ultrasounds.

Pelvis X-ray photographs and Isterosalpingography give reliable results, but have the disadvantage of exposing pelvic organs to ionogenic radiations, which can be particularly dangerous when a woman is pregnant.

Belocator (5) avoids the exposure to ionogenic radiations but does not allow the localization of the IUD and the diagnosis of the early forms of uterine walls perforation. Moreover it must not be used when a woman might be pregnant because the probe might damage the foetus. Furthermore a lot of misleading positives and negatives could be obtained.

Ultrasonography (2,3,4,9,11,12) gives reliable results compared with the above mentioned techniques and offers the chance of an exact localization of the IUD and of its connections with the pelvic organs, without causing any damage, particularly to the ovaries or to possible pregnancy (3).

Up to now the A-scan (12) mode, and more recently the B-scan (2,4,9,11) mode, have been employed, while we have not heard of Ultrasonography in « Real Time » being used.

MATERIAL AND METHODS

We have examined nine patients using intrauterine contraceptive devices, whose « markers » were not visible.

For the ecographies in « Real Time » we used an Echo Camera Aloka, model SS-D 202, with a dynamic gain of 120 Db, with an intensity of 2 M Hz.

In order to obtain a fine visualization of pelvic organs, the examinations were carried out after filling up the patients' bladders.

We have considered continuously moving sections of pelvic organs on longitudinal, oblique and transverse planes.

When an echographic localization of the IUD was not possible, X-ray photographs of the pelvis were taken.

RESULTS

Among the nine cases we have observed, we noticed the absence of the IUD in the uterine cavity, as it had been ejected, in three cases (33%). This result was confirmed by X-ray photographs. In six cases (66%) the IUD was present in the uterine cavity, (Figs. 1,2,3,4,5,6). In one of these six cases a nine week pregnancy was going on, as we can infer:

- 1) from the gestational sac size
- 2) from the highly frequent, rhythmic activity of the cardiogenic tube
- 3) from the presence of the interdecidual space.

The echographic visualization was not followed by a X-Ray photograph control, in order not to expose the patients to needless ionogenic radiations.

DISCUSSION

The results obtained show that the Echographic technique in « Real Time » gives the same reliable results as the X-ray photograph does.

The cases examined indicate that the disappearance of the « markers » from the external uterine orifice is due to their withdrawing into the uterine cavity (2/3

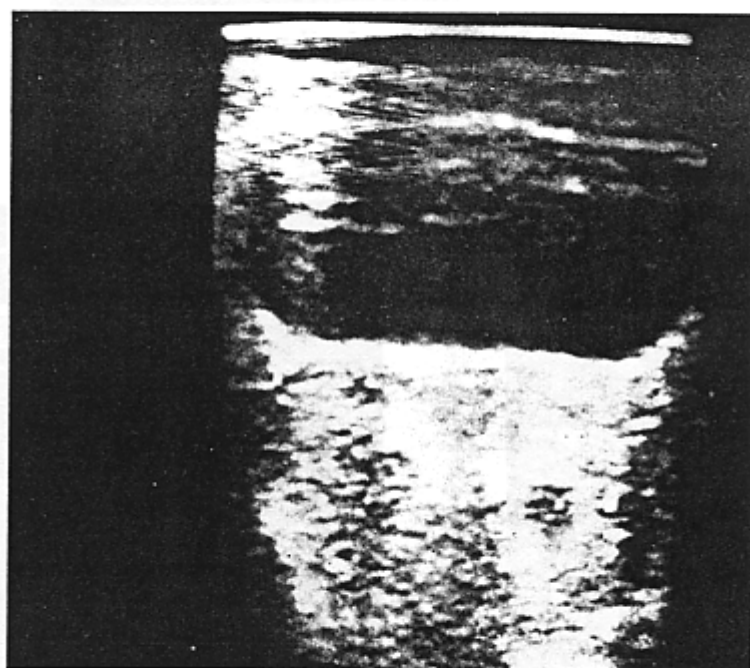


Fig. 1 — Transverse section.

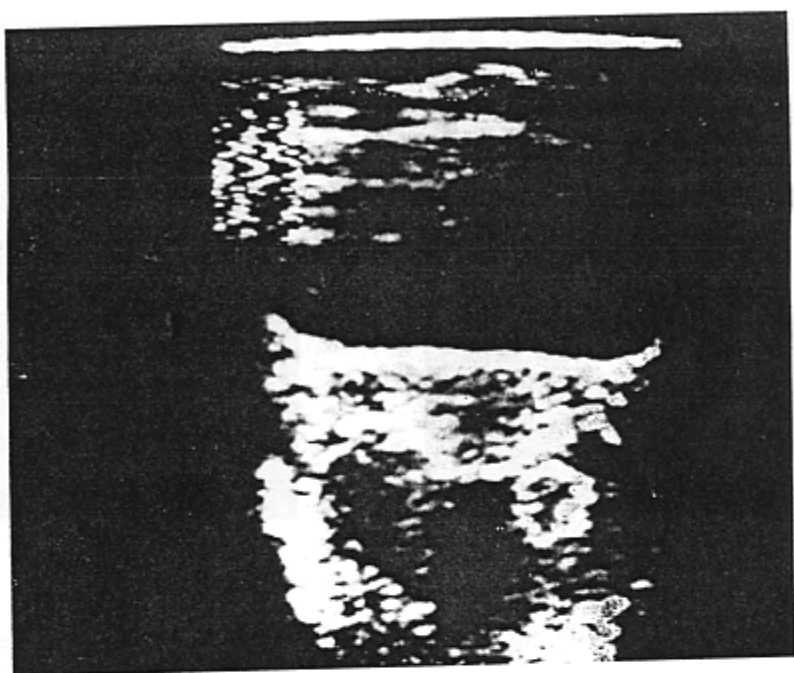


Fig. 2 — Transverse section.



Fig. 3 — Longitudinal section.

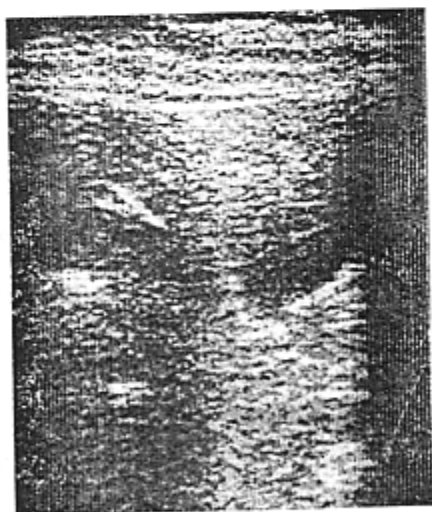


Fig. 4 — Longitudinal section.

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Fig. 5 — Longitudinal section.



Fig. 6 — Transverse section.

of the cases) or to the expulsion of the IUD (1/3 of the cases). These results confirm the ones above related (4,5).

The use of echotomography in « Real Time », compared with the A-scan and B-scan modes, allows quicker examinations and more detailed images. In fact, using the Ultrasonography in « Real Time », it is possible to make very close tomograms and to have a clearer visualization of the whole organ. Moreover, the dynamic characteristics of the Ultrasonography in « Real Time » allow us to point out the presence of the IUD within the uterus and to appreciate the possible contractile uterus activity which causes the expulsion or the shifting of the IUD.

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