

ACTINOMYCES IN ASSOCIATION WITH MULTILOAD COPPER 250 IUD

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Summary

Two of 37 women fitted with ML Cu 250 showed Actinomycetes like organisms in the vaginal smears. Actinomyces has not been reported before inspite of extensive use of IUDs from India. It is proposed that the shape of ML Cu 250 and the subsequent tissue injury play significant role in causation of Pelvic Actinomycosis.

Introduction

Intrauterine devices (IUDS) are a safe and effective method of contraception. In recent years pelvic actinomycosis has been observed in users of various forms of IUDS (Lomax *et al* 1976; Hager *et al* 1979; Aubert *et al* 1980). The organism has also been detected in routine Papanicolaou stained cervicovaginal smears (Gupta *et al* 1976 and 1978; Spence *et al* 1978; Jones *et al* 1979; Duguid *et al* 1980). Actinomycetes has been reported in association with Lippes loop, Dalkon shield

as well as other medicated IUDs like Copper T (Cu T) and Copper 7 (Cu 7) (Gupta *et al* 1978; Hager *et al* 1979; Aubert *et al* 1980). Duguid and Co-workers (1980) observed a significantly low incidence of actinomycetes like organisms in women fitted with Cu 7 and Cu T as compared to those with plastic devices. They suggested that this was due to the bacteriostatic action of Copper and recommended wider use of copper devices.

Multiload copper 250 (ML Cu 250) is a new device, which is clinically superior to other copper devices (Sandovsky and Yarkoni, 1978; Van O. S. *et al* 1978). We have observed actinomycetes like organisms in 2 of 37 women fitted with ML Cu 250 and followed cytologically for a period of 2 years. Brief clinical data of the 2 cases is reported.

CASE REPORT

Case 1

A 25 year old woman, gravida 3 had ML Cu 250 inserted in the immediate post abortal period. She developed acute cervicitis and salpingitis 3.5 months later and actinomycetes like organisms and trichomonas vaginalis were seen in Papanicolaou stained cervicovaginal smear. She did not respond to antibiotics and repeat smear again showed the organisms. The de-

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vice was removed 5.75 months after insertion and the patient responded to antibiotics.

Case 2

A 28 years old woman, gravida 2 had ML Cu 250 inserted after menstrual regulation. Actinomyces were observed in a routine cervico-vaginal smear taken at 10.5 months after IUD insertion. She was asymptomatic.

Cytology findings

In both the cases, actinomycetes like organisms were seen in Papanicolaou preparation as clusters of small irregular, blue staining material under low power magnification. At higher magnification branching filaments were seen in these clusters (Fig. 1). Filaments were better visualized in preparations stained with gram's stain (Fig. 2). No immunofluorescent studies were done and diagnosis was made on the bases of morphological features described by Gupta et al (1976 and 1978).

Discussion

In spite of extensive use of Lippes loop, Cu 7 and Cu T in our Institution (600 cases followed cytologically for 2-8 years-unpublished observations) and elsewhere in India (Affandi and Virkar, 1976; Misra et al 1977; Engineer et al 1978; Aikat and Chadda, 1980; Lutrra et al 1980), no case of pelvic actinomycetes has been reported. Therefore, the observation of 2 cases of actinomycetes among 37 women who used ML Cu 250 argues against a protective role for Copper as suggested by Duguid et al (1980). We feel that shape of the device has a major role to play in predisposing to infections with actinomycosis. The Dalkon shield and ML Cu 250 are similar in having projecting spurs. A large number of cases of actinomycetes are reported in association with Dalkon shield (Bhagavan and Gupta, 1978; Gupta et al 1978; Abert et al 1980). Superficial disintegration of IUD with progressive en-

crustation on parts of device occurs with time (Gupta et al 1971). It has been suggested that calcium encrusted fragments may act as a foreign body for growth of actinomycosis (Duguid et al 1980). ML Cu 250 possesses relatively more plastic area uncovered by Copper wire as compared to Cu T and Cu 7 and the projecting spurs may provide base for rapid formation of necessary tupe of foreign body for the growth of actinomycetes.

In conclusion, we believe that the shape of the intrauterine device and subsequent tissue injury play a significant role in colonisation of female genital tract with actinomycetes.

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