Antibiotic prophylaxis for intrauterine contraceptive device insertion

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Prophylactic use of antibiotics to reduce the risk of upper genital infection after IUD insertion yields no benefit with respect to pelvic inflammatory disease or IUD continuation rates.

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1. EVIDENCE SUMMARY

The review analysed data from randomized controlled trials on antibiotic prophylaxis for insertion of intrauterine contraceptive devices (IUD), which included doxycycline in different dosage regimens or azithromycin versus placebo or no treatment. The outcome measures were pelvic inflammatory disease, unscheduled visits to the clinic and removal of the intrauterine contraceptive device (IUD) within three months of insertion. A reduction in unscheduled return visits due to an IUD-related problem was seen in one of the trials but the results were not replicated in other trials. Little benefit was conferred by the use of prophylactic antibiotics with respect to pelvic inflammatory disease (PID) or IUD continuation rates. All trials included in the review reported a low risk of IUD-associated infection, and IUD use was safe with or without the use of antibiotics, especially in populations with low prevalence of sexually transmitted infections (STI).

All adequately controlled trials, which could be identified, have been included and appropriately analysed. The reviewers noted the heterogeneity of study populations. High or low prevalence of sexually transmitted diseases could have been considered as a stratification variable in this review.

2. RELEVANCE TO UNDER-RESOURCED SETTINGS

2.1. Magnitude of the problem
Although contraceptive prevalence has increased in the East and South-East Asia, there is still an unmet need for family planning as evidenced by reliance on traditional methods and recourse to abortion for unwanted pregnancies. In the People's Republic of China and Viet Nam, which had target-driven family planning programmes in the early and mid nineties, IUD use predominates. The association of IUD with gynaecological infection has been a problem, which has been highlighted in discussions with service providers at primary health care levels.

In contrast, IUD use in countries such as Cambodia, Laos and Myanmar remains low owing largely to the poor image of the device among the people. Here again, the IUD continues to be blamed for pelvic infections despite the fact that careful screening of women could eliminate the risks of acquiring infection. Furthermore, the bias against the IUD is based on complications encountered during use of earlier types of IUD. In addition, protocols presenting contraindications and instructions that reflect clinical and epidemiological experience gained with first generation of IUDs are still in use.

At most public sector service delivery points, antibiotic prophylaxis for IUD insertion is not routinely provided. However, in the private sector, administration of doxycycline or tetracycline one hour before insertion (followed by a 2-3 day course) is common practice in some settings. Although screening for gonorrhoea and chlamydial infection cannot be performed easily in either public or private care settings in many developing countries, the prevalence of both have been found to be low in China in community-based studies. The prevalence of chlamydia in healthy asymptomatic women was found to be 2% in Beijing (1) and 6% in Shanghai (2). In a low-risk population of women in Yunnan, the prevalence of gonorrhoea was 0.3% and chlamydia, 5.5% (3). A cross-sectional descriptive study of RTI prevalence at the MCH/FP Centre in Hue, China, found that RTI was moderate (21.2 percent of women), with the majority of infections being endogenous, including just 28 cases of STI (4.7 percent). Very few cases of cervical infection were identified, 0.8 percent chlamydia and 0.2 percent gonorrhoea (4). There have been few reports of laboratory diagnosed reproductive tract infections in other countries in South-East Asia.

2.2. Feasibility of the intervention

The review argues against implementation of antibiotic prophylaxis as it appears to confer little benefit, especially in populations with low prevalence of sexually transmitted infections. In such settings, it should be feasible to abandon routine antibiotic prophylaxis if it is currently the norm.

2.3. Applicability of the results of the Cochrane Review

The trials included in the review were conducted in the Kenya, Nigeria, Turkey and the USA. The evidence from the Cochrane Review is applicable to developing country settings in that contemporary IUD use is safe with or without the use of prophylactic antibiotics. The results are somewhat equivocal with regard to the benefits of prophylactic antibiotics in high STI prevalence areas. The results should be disseminated to programme managers of reproductive health and family planning programmes to prevent unnecessary use of antibiotics in IUD insertion, both in countries where it is a common family planning method and in others where it is promoted as a safe, long-term method.

2.4. Implementation of the intervention

The existing IUD protocols should be reviewed and rationalized and made up-to-date and consistent with respect to antibiotic prophylaxis. Terminating unnecessary antibiotic prophylaxis would be cost-effective both for the women and the services; it would also reduce the risk of antibiotic related side-effects and resistance. As the risk of PID is related to the insertion process and background risk of sexually transmitted infections, careful screening of women for low risk of RTIs should be carried out and instructions related to insertion techniques strictly followed.
2.5. Research

The low rate of PID and premature removals of IUD in large randomized controlled studies reinforces the safety of contemporary IUD use. As endogenous vaginal infections (as opposed to new infections introduced by IUD insertion) are the commonest RTIs in women in South–East Asia, the possible relationship between endogenous vaginal infections, and IUD use should be further explored.

References

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