Faculty of Sexual and Reproductive Health Care Clinical Effectiveness Unit

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Recommendation from the CEU: Antibiotic prophylaxis for intrauterine contraceptive use in women at risk of bacterial endocarditis (July 2008)

Recommendation

Prophylactic antibiotics are NOT required for the insertion or removal of intrauterine contraception even in women with conditions where the risk of infective endocarditis may be increased (Grade C).

Background evidence

People at risk of developing infective endocarditis are those with:

- Acquired valvular heart disease or stenosis or regurgitation
- Valve replacement
- Structural congenital heart disease, including surgically corrected or palliated structural conditions, but excluding isolated atrial septal defect, fully repaired ventricular septal defect or fully repaired patent ductus arteriosus, and closure devices that are judged to be endothelialised
- Hypertrophic cardiomyopathy
- Previous infective endocarditis

Previously antibiotics were routinely given to people at risk of infective endocarditis who were undergoing an interventional procedure (e.g. dental, genitourinary, urological, obstetric, respiratory or ear nose and throat). However, the evidence to support this use of antibiotics is limited. In addition, evidence about the incidence of bacteraemia and the risk of subsequent infective endocarditis following an interventional procedure is limited. There is a real risk of antibiotic resistance with inappropriate antibiotic use.

The risk of infective endocarditis in at-risk women following intrauterine contraceptive insertion or removal is unknown. Transient bacteraemia from vaginal organisms has been identified within 10 minutes of removal and replacement of intrauterine contraception but in only 13% of women in a small clinical trial.[1] However, bacteraemia has been identified even after tooth brushing. Evidence on the use of antibiotics for the insertion and removal of intrauterine contraception is very limited. One case report was identified which reported infective endocarditis in a woman with valvular heart disease following insertion of an intrauterine device.[2] No antibiotic prophylaxis was given at the time of insertion and the device was spontaneously expelled prior to onset of symptoms. Despite limited evidence, but given the potential seriousness of infective endocarditis, the Faculty of Sexual and Reproductive Health Care was cautious in guidance published in November 2007 and recommended *the use of intravenous antibiotic prophylaxis during intrauterine contraception*

insertion or removal in women with previous endocarditis, with a prosthetic heart valve of a history of bacterial endocarditis (Grade C).[3]

Since this guideline was published, a review by the National Institute for Clinical Excellence (NICE)[4] found no evidence to link level, frequency and duration of bacteraemia with the development of infective endocarditis. Moreover, the evidence did not show a casual relationship between having an interventional procedure and the development of infective endocarditis. NICE considered that for people who are at risk of infective endocarditis (as noted above):

- there is insufficient evidence to determine whether or not antibiotic prophylaxis in those at risk of developing infective endocarditis reduces the incidence of infective endocarditis when given before a defined interventional procedure (both dental and non-dental).
- there is little evidence to support offering antibiotics routinely as a preventative measure to people at risk of infective endocarditis undergoing interventional procedures.

The NICE guideline recommends that **antibiotic prophylaxis is no longer offered routinely for defined interventional procedures.**

The CEU supports these recommendations and considers **that antibiotic prophylaxis for the prevention of infective endocarditis is NOT recommended in women undergoing intrauterine insertion or removal even in women with conditions where the risk of endocarditis is increased.**

References:

1. Murray S, Hickey JB, Houang E. Significant bacteraemia associated with replacement of intrauterine contraceptive device. *American Journal of Obstetrics and Gynecology* 1987;**156**:698-700.

2. Cobbs CG. IUD and endocarditis. *Annals of Internal Medicine* 1973;**78**:451.

3. Faculty of Family Planning and Reproductive Health Care Clinical Effectiveness Unit. Intrauterine Contraception. http://www.ffprhc.org.uk/admin/uploads/CEUGuidanceIntrauterineContraceptionNov07.pdf. 2007.

4. National Institute for Clinical Excellence. Prophylaxis against infective endocarditis. http://www.nice.org.uk/guidance/index.jsp?action=download&o=40039. 2008.