Detection of novel organisms associated with salpingitis, by use of 16S rDNA polymerase chain reaction

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Abstract:

Although Chlamydia trachomatis and Neisseria gonorrhoeae are established causes of salpingitis, the majority of cases have no known etiology. We used broad-range 16S rDNA polymerase chain reaction to identify novel, possibly uncultivable, bacteria associated with salpingitis and identified bacterial 16S sequences in Fallopian-tube specimens from 11 (24%) of 45 consecutive women with laparoscopically confirmed acute salpingitis (the case patients) and from 0 of 44 women seeking tubal ligations (the control subjects) at Kenyatta National Hospital, Nairobi, Kenya. Bacterial phylotypes most closely related to Leptotrichia spp. were detected as the sole phylotypes in 1, and mixed with other bacterial phylotypes in 2, specimens. Novel bacterial phylotypes and those associated with bacterial vaginosis, including Atopobium vaginae, were identified in 3 specimens. N. gonorrhoeae and Streptococcus pyogenes were identified in 2 and 1 specimens, respectively. The finding of novel phylotypes associated with salpingitis has important implications for the etiology, pathogenesis, and treatment of this important reproductive-tract disease syndrome.