

## Gentamicin Resistant Enterococcus Spp. in Vaginal Swabs from Women with Several Spontaneous Abortions

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**Background & Objectives:** *Enterococcus spp.* are natural inhabitants of the gastrointestinal tract and the vagina in humans but has become increasingly important as hospital-acquired pathogens. Enterococci have been associated with infections of the urinary tract, post-surgical wounds and endocarditis. They have a remarkable ability to adapt to exposure to antibacterials maintaining high-level resistance to aminoglycosides and glycopeptides. The purpose of this study, is Enterococcus species resistant to gentamicin isolated from vaginal swab samples from women with spontaneous abortion.

**Methods:** A total of 198 vaginal swab samples were taken from women with several spontaneous abortions in Lorestan, Iran, from January 2009 to December 2010. Samples were cultured on sheep blood agar and identified to genus level with biochemical and cultural characteristics, catalase, bile esculin, hydrolysis of PYR and growth in NaCl 6/5%. Isolates were further identified to the species level by carbohydrates fermentation tests. Antibiotic resistance test were done by disk diffusion methods for gentamicin and vancomycin. The minimum inhibitory concentration (MIC) for gentamicin were determined by the broth dilution methods. *E. faecalis* ATCC29212 was used as control strain.

**Results:** We have detected 126 enterococci isolates of all 198 vaginal swabs, (82 *E. faecalis* (65%), 44 *E. faecium* (34%)). Antimicrobial resistance rates were as follow: Vancomycin (2%), gentamycin (26%). The MIC results have shown that 4 of 51 (7.84%) isolates were resistant to gentamicin (MIC $\geq$  512  $\mu$ g/ml). This study will be continued by molecular identification and pulsed field gel electrophoresis of resistance strains to investigate clonally spread.

**Conclusion:** Enterococci has been reported as a part of (about 20%) the normal flora of the genital tract but we had detected theme as 65% of our isolates. The frequency of Vancomycin resistance Enterococci (VRE) isolated in our study was about 4% of all. According to our investigation there wasn't any report about this level of gentamicin resistant level observed among the Enterococcus strains isolated from vaginal swabs until now. Due to the predilection of resistance in enterococci, species identification can provide an important clue for choosing an appropriate antibiotic therapy.

**Keywords:** Enterococcus; Gentamicin Resistant; Women