

PENGARUH SPESIES BAKTERI DAN RATIO SPERMATOZOA/BAKTERI TERHADAP VITALITAS SPERMATOZOA MANUSIA SECARA IN VITRO

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ABSTRACT

The effect of some species of bacteria and sperm/bacteria ratio on sperm vitality has been studied. Four species of bacteria were used in this study : Staphylococcus epidermidis, Streptococcus faecalis, Enterobacter aerogenes were obtained from semen culture of infertile men and E. coli was obtained from prostatic fluid culture from men with prostat and urinary system disturbances. Five semen samples fulfilling the WHO criteria (1992) were used in this study. After preparation by Percoll gradient-column method, sperm were inoculated in a microplate with Staphylococcus epidermidis, Streptococcus faecalis, Enterobacter aerogenes, E. coli under the sperm/bacteria ratio 1:10 and 1:1000. Sperm vitality was observed immediately, 3 and 6 hours after inoculation. At the second experiment, the detrimental influence of bacteria on sperm was prevented by adding penicillin. Results of this study indicated that Staphylococcus epidermidis, Streptococcus faecalis and Enterobacter aerogenes were not affected on the sperm vitality. The effect E. coli on sperm vitality occurred at the ratio of sperm/bacteria 1: 10 after 3 and 6 hours incubation and at the ratio of sperm/bacteria 1: 1000 occurred after 6 incubation. It might be concluded that the negative influence of bacteria on sperm vitality in vitro, is dependent on spesies of bacteria, bacteria concentration and time of incubation. The most detrimental effect on sperm vitality was shown by E. coli at the ratio of sperm/bacteria 1: 10 after 6 hours incubation. This detrimental effect was not prevented by the addition of penicillin.

Key words : *Species of bacteria, Sperm/bacteria ratio, Sperm vitality*
