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### Superoxide Radical Formation in Isolated PMN from Experimental Vaginal Trichomoniasis

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#### Abstract:

Trichomoniasis, the most widespread sexually transmitted disease is caused by *Trichomonas vaginalis*. This parasite is site specific for the genitourinary tract and recruitment of macrophages as well as polymorphonuclear neutrophils (PMN) to the site of infection is the first line of defense as a component of non-specific resistance and immunity. In this study, BALB/c mice were infected with 10 isolates from symptomatic and 10 from asymptomatic patients. Then PMN from vaginal washes, vaginal tissue and blood of infected mice was isolated and the rate of superoxide formation by intact stimulated PMN was measured. Results showed that, mice infected with symptomatic isolates indicated significant increase in polymorphs with increase in days of infection as compared with mice infected with asymptomatic isolate and control (uninfected) animals. Vaginal tissue cells generated maximal amount of superoxide in symptomatic isolates infected animals ( $5.17 \pm 0.36$ ) as compared to asymptomatic isolates ( $4.54 \pm 0.43$ ), which brings out the maximal abnormality in PMN in this localized area. The amount of superoxide radicals generated by cells of vaginal washes and blood of symptomatic isolate infected mice ( $4.29 \pm 0.25$  and  $2.16 \pm 0.35$ ) was less than the asymptomatic isolate ( $4.94 \pm 0.49$  and  $3.18 \pm 0.26$ ), respectively. This study indicates that super oxide radical generation may play role in establishing the infection.

#### Keywords:

Trichomoniasis . Super oxide radical . PMN

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