

Phase II also showed no viral shed by either group of vaccinates or by the contact controls. IBR was isolated from the blood of one animal on one day, but not

from the nasal secretions. The contact controls did not show any evidence of exposure.

## Effect of Certain Antibiotics on the Bacterial Load and Fertility of Cattle and Buffalo Semen

A. M. Osman, A. H. Zaghloul, S. H. Shehata, B. G. Abdel-All, S. H. Abed-Allah

Dept. Theriogenology

Fac. Vet. Medicine

Assiut University

Assiut, Egypt

### Abstract

Semen samples were collected aseptically from 11 Native and 4 buffalo bulls. All animals were clinically healthy and free from brucellosis, tuberculosis and trichomoniasis. Bacteriological identifications, total viable bacterial count (T.V.B.C.) and antimicrobial sensitivity tests were done from the raw semen before evaluation. Six different antibiotics were added to equal portions of egg yolk buffer citrate solutions and another sample was kept free as control before semen extension. Only samples with initial individual motility more than 60% were subjected to cooling and preservation at 4 °C for further studies.

The results showed significant difference in T.V.B.C. ( $\times 10^6$ ) of fresh semen between cattle ( $5.37 \pm 0.34$ ) and buffaloes ( $3.23 \pm 0.29$ ). The numbers of different isolates were 31 in cattle and 14 in buffaloes. The recovered Microorganisms from bull semen included *E. Coli* (36.36%), *Staph. epidermidis* (27.27%), *Corynebacterium renal* (27.27%), *Klebsiella oxytoca* (13.64%), *Strept. faecalis* (13.64%), *Strept. pyogenes* (13.64%), *Enterobacter cloacae* (4.55%) and *Proteus mirabilis*

(4.55%). In buffalo bulls, the isolated bacteria included *E. Coli* (75.0%), *Staph. epidermidis* (50.0%), *Strept. faecalis* (12.5%), *Strept. pyogenes* (12.5%), *Klebsiella oxytoca* (12.5%) and *Proteus mirabilis* (12.5%).

The sensitivity tests showed that *Gentamycin* was the most effective antibiotic (88.8%) followed by Amikacin (86.6%), *Chloramphenicol* (80.8%), *Rifadine* (77.7%), *Amoxil* (73.4%), *Penicillin* (51.1%) then *Streptomycin* (42.3%). The highest percentages of sperm motility after 4 days storage at 4°C were recorded with *Gentamycin* (60.3 2.4) followed by *Chloramphenicol* (57.2 2.04), *Penicillin-Streptomycin* (54.83 2.44) and *Amoxicillin* (52.5 2.38). *Gentamycin* could reduce markedly the T.V.B.C. from 35.65 3.12 ( $\times 10^5$ ) to 9.6 1.5 ( $\times 10^5$ ) after storage while the untreated samples showed a higher increase to 46.5 3.4 ( $\times 10^5$ ). The clinical applications of *Gentamycin* and *Penicillin-Streptomycin* treated semen resulted in pregnancy rates of 63.2% and 52.9% in inseminated cows respectively.

As a conclusion, ***Gentamycin*** proved to be effective in terms of reduction of bacterial count, safety for sperm survival and improvement of fertility in bovine.