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BACTERIOLOGICAL STUDIES ON ARABIAN MARES WITH GENITAL INFECTION

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SUMMARY

Out of 111 cervical swabs from Arabian mares, during the period between April 1984 to Feb. 1985, eighty nine bacterial isolates were recovered. Forty five pure bacterial cultures were isolated. These cultures represented: *Streptococcus, Styphylococcus, Micrococcus , Corynebacterium, Klebsiella, E.coli, Pseudomonus* and others.

INTRODUCTION

The examination of mares for pregnancy and the cause of non conception is both an art and a science (1). Cervical swabs have been taken from mares in which genital infection was suspected or as means of eliminating infection as a cause of infertility (2) . Hughes and loyt (3) reported that bacterial infection of the genital tract is an important cause of infertility in mares. on the other hand, Dawson (4) reported that all cases of endometritis were associated with organisms which were also among the normal flora, and therefore questioned the diagnostic value of positive cultures from swabs.

This study was designed to investigate the prevalence of bacterial infection in clinically diagnosed genital infections of Arabian mares. Subsequent identification of the isolated organisms was carried out.

MATERIALS AND METHODS

During a period from April 1984 , to February 1985, clinical examination was made on the external genitalia which then were thoroughy washed down and a sterile speculum was inserted through the lips of the vulva into the vagina. Careful examination of the vagina and cervix was performed for the presence of discharge or any other abnormality which might be present. A cervical swab was then taken. Swabbing was carried out by the introduction of two sterile bacteriological swabs via sterile tubular specula (5).

Swabs were taken at the height of the estrus period as recommended before (2,6,7). Swabs were then cultured under aerobic and imcroaerophilic conditions as soon as possible on aerobic and microaerophilic conditions as soon as possible on blood agar in addition to MacConkey's agar and incubated at 37 °C for 48 hours. Cultures were examined after 18, 24 and 48 hours. Isolates were purified and identified by conventional methods (8).

RESULTS

It was found that out of 111 cultured cervical swabs obtained from Arabian mares, eighty nine showed bacterial colonization while the remaining 22 yielded no grwoth. A mong the 89 cervical swabs, 45 pure bacterial isolates were recovered . The most frequent bacterial isolates recovered from cervix were:- *Str. zooepidemicus, str. equisimmilis, str. faecalis, Staph. epidermidis, Staph. aureus, micrococus, Corynebacterium equi, C. renale, C. pyogenes, Esherichia coli, Edwardsiella, Klebsiella, spp. Pseudomonas aeroginosa and Anthracoid* spp. (Table -1).

There was a higher incidence of str. zooepidemicus than *Str. equisimilis* . There was one pure isolate of *Str. zooepidemicus* while in the other five instances other organisms were also present.

Table 1: Bacterial isolates from Arabian mares cervical swabs.

Bacterial isolate	Culture recovered	
	pure	Mixed
Str. zooepidemicus	*1*	*5*
Str. equisimilis	*0*	*2*
Str. faecalis	*2*	*6*
Staph. aureus	*8*	*14*
Staph. epidermidis	*4*	*6*
Micrococcuse	*3*	*3*
Corynbact. Pyogenes	*2*	*1*
E. coli	*9*	*9*
Anthracoid Spp.	*15*	*16*
Edwardsiella	*0*	*1*
Klebsiella	*1*	*0*
Pseud. aeruginosa	*0*	*1*
Total	45	64

DISCUSSION

The isolation of bacteria from cervical swabs may probably be associated with acute endometritis in mares (10) . Other isolates *Str. zoopidemicus , E. coli, klebsiella spp., Pseud. eruginosa and Str. equisimilis)* may be related to infertility. Murray-Bain (2) reported that in infertility the picutre of infection would appears to be more serious and resistant to treatment. The relationship of *Str. zooepidemicus* to endometritis in mares resembles that of *C. pyopgenes* to this condition in the cow (4). *Str. zooepidemicus* is considered to be responsible for about 50% of genital infections and an important cause of sterility (11), while occasionally *E. coli* appear to be the causative organism of acute metritis and sometimes causes persistent infection (12) . Pure cultures of *Klebsiella spp.* may also be significant, because this orgainsm has caused outbreaks of infertility

in studs which could be conveyed by the stallion at service (12).

The isolation of bacteria neither necessarily proove the presence of infection nor the failure to isolate bacteria eliminates it. Bacterial which have been isolated from diseased mares also could be recovered from healthy mares (3). Failure to isolate becteria from twenty two swabs could be explained on the bases that used growth media or methods of incubation may have been not favourable for some organisms or the focus of infection might be high in the horns and inaccessible to the swabs. Besides, some bacteria may have been lost during transport of swabs.

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دراسة جرثومية لالتهاب القناة التناسلية للافراس العربية

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الخلاصة

جمعت ١١١ عينة مهبلية لافراس عربية لوحظ عليها التهاب القناة التناسلية للفترة الواقعة بين نيسان ١٩٨٤ لغاية شباط ١٩٨٥. وجد ان ٨٩ عينة كانت نقية.
ومثلت العزلات اجناس مختلفة منها المكورات العنقودية والسبحية والاحادية والوتديات والاشيرشيا القولونية والكلبسيلا والسيدموناس وغيرها.