البيكتريا المسببة للشيوع المتمكر في أنات الجاموس في مصر العليا

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قام الباحثون بعدد 200 خمسة مساحة بشيوع متمكر وعدد 46 جاموس دومية طبيعي للشيوع ووزل ذلك عن عدة الميزان الحواكة ودورة الزراعة بأسوان وذلك كعد تسع قري تابعة لأسيوط وأسيوط.

وكانت البيكتريا المصلية من الحيوانات الطبيعية والبيكروهايدية عدد 10 ميكروكلاعد وعدد 4 ميكروكلاعد.

وعدد 4 ميكروكلاعد في النوى عدد 10 أشجار وكلا عدد تلك الميكروكلاعد التي تم فحصاً من الجاموس الضائع بأزهرة الشيوخ المتمكر في عدد 28 ميكروكلاعد وعدد 10 ميكروكلاعد منعقة عدد 23 ميكروكلاعد مذيب للدم وعدد 12 كورني عدد 12 كورني عضفر صبغة عدد 22 كورني عدد 4 كورني عدد 34 ميكروكلاعد عدد 34 ميكروكلاعد عدد 34 ميكروكلاعد عدد 34 ميكروكلاعد عدد 34 ميكروكلاعد عدد 34 ميكروكلاعد عدد 34 ميكروكلاعد عدد 34 ميكروكلاعد.

ولقد وجدت بعض الفرق في البيكتريا المصلية المسببة للأمراض المقدمة بالجهاز التناسلي كالعنقودية والكورية والكورية الكوفية صنفة والكورية الدقيقة حيث أنها توجد في الجاموس العصاب الشيوخ المتمكر ولا يوجد في الجاموس الطبيعي الشيوخ. ولقد وجدت بعض الميكروكلاعد المدمجة للدم المسمى بنيسة في الجاموس الطبيعى الشيوخ والتي من الممكن أن تكون تتكاثر وتتحول بسبب قلة المقاومة في الجسم وتحول إلى ميكروكلاعد المسبب للأمراض واتحول الميكروكلاعد الطبيعى الشيوخ إلى حيونات مصدارة.

ولقد تم اكتشاف أنواع أكثر من البيكتريا في حيوانات الضيوف منها في الحيوانات التي توجد في المزارع الحكومية.
BACTERIOLOGICAL STUDIES OF THE REPEAT BREEDER BUFFALO COWS IN UPPER EGYPT
(With 3 Tables)

By
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SUMMARY

Bacteriological examination of cervical samples were obtained from El-Hawatka buffalo farm (62 repeat breeder and 36 normal breeder buffaloes), Assiut Agriculture school (9 repeat breeder) and from 9 villages in Assiut and Abutig (109 repeat breeder).

The bacterial flora which were isolated from the normal breeder buffaloes were, 10 micrococci (20.04%), 6 Gaffkia (8.33%), 4 B-haemolytic streptococci (8.33%), 8 α-hae-
molytic streptococci (16.66%), 3 E.coli (6.26%), 4 paracolon group (8.33%) and 15 Anthracoid (31.25%). However, the bacterial organisms which were isolated from the repeat breeder buffaloes were 38 micrococci (13.42%), 31 staphylococci (10.95%), 33 B-haemolytic streptococci (11.68%), 13 C.pyogenes (9.59%), 17 unclassified coryn-bacterium (6.01%), 20 E.coli (7.01%), 34 Klebsiella (12.01%), 34 proteus (12.01%) and 30 Anthracoid (10.64%). The repeat breeder buffaloes exhibited more pathogenic organisms (staphylococci, C.pyogenes, unclassified corynebacterium and Klebsiella) which were not present in the normal breeding animals. However, few normal breeding cows harboured streptococci as a pathogenic bacteria. These bacteria might flourish under favourable conditions as lowered resistance of the animal or other stress factors.

The bacterial isolation from villages was more than that from the Governmental farms.

INTRODUCTION

Some investigators (THYGESEN, 1948; RASBECH, 1954; GEISSLER, 1954; DAWSON, 1960; ZAKI et al. 1962; BARAKAT, 1965; ROBERTS, 1971; AWAD, 1972; ABO-EL-ATA (1973) and AWAD et al. 1977), could isolate, E.coli, M.albus, streptococci, corynebacterium pyogenes, M.aureus, proteus, B.subtilis, Pseudomonas aeruginosa, M.citrus, B.liquefaciens and yeast from normal breeding cows as well as from other ones affected with cervicitis, endometritis and metritis.

Repeat breeding syndrome disturbs the reproductive efficiency of animal either due to failure of fertilization (ROBERTS, 1971) or early embryonic death (BOSREDKAR, 1973). Both of them are reported to be due to the bacterial infection in the uterus (EASLEY et al. 1951; DAWSON, 1960 and ABO EL-ATA, 1973).

Bacterial organisms that causes endometritis in cattle suffered from repeat breeding, occupy the highest percentage in comparison with other causes (CUPPS, 1973). LUFT (1976) studied the fertility status of a dairy herd of cows and found that 67% were repeat breeders as a result of endometritis.

The present study was designed to demonstrate the bacteria causing repeat breeder in buffalo cows in order to achieve a suitable treatment.

MATERIAL and METHODS

The material examined in this work included 200 buffalo cow, suffering from repeat breeder (El-Hawatka buffalo farm, Assiut Agriculture school, Assiut and Abutig Animal health centres and their villages).

Further 36 buffalo cows with normal estrus were examined as control. Information concerning the breeding history of each animal was collected from the farm book or owner. The animals were Gynaecological examined.

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The samples from cervical discharge were taken aseptically for cultivation on different media as: Blood agar, Nutrient agar, MacConkey's agar, Mannitol salt agar, cetrimide agar and alkaline peptone water. After 24 hrs. incubation, alkaline peptone water was subcultured into blood agar to isolate vibrio foetus. All cultures were incubated at 37°C aerobically for 48 hrs.

Suspicious looking colonies from different media were screened morphologically, biochemically according to the methods described by BAILEY and SCOTT (1974) and BUCHANAN and FIBBONS (1974).

RESULTS

Table 1, showed the incidence of animal with infected and sterile genitalia in different localititis. It was evident that high percentage of infected genitalia (91.7%) was present among buffaloes reared in villages. Moreover, the incidence of sterile cases was higher in control groups (16.16%) than in the repeat breeder buffalo cows (9.8%).

It was of interest to mention that single infection of uterus was rarely met with in the buffalo cows reared in villages, in which mixed infection were more predominant. Also the incidence of bacterial infection in Assiut Agriculture school was lower than that detected in El-Hawatka farm as well as the infection was higher in the villages than in the buffalo farms (Table 2).

Table 3, showed the distribution of the isolated bacteria from control and repeat breeder buffalo cows. It was clear that the number of isolates was markedly higher in repeat breeder buffalo cows than those in control group. Furthermore, the repeat breeder buffalo cows were infected with pusforming microorganisms as staphylococci, Klebsiella, Corynebacterium and un-classified corynebacterium organism which were not present in the control group.

DISCUSSION

The incidence of sterile cases in normal and in repeat breeder buffalo cows 16.6% and 8.9% in normal and repeat breeder respectively, is more or less similar to those recorded by DAWSON (1959), GIBBONS et al. (1959); SHOHAN et al. (1977) and AWAD and EL-HARIRI (1977). However BARAKAT (1965) recorded higher results.

It was also evident from this investigation that the incidence of repeat breeder buffalo cows was higher (24.61%) in the villages than that found in the Governmental farms (13.9%). Both values were nearly similar to that recorded by EL-NAQDAR and SHERRY (1974) in Assiut province (20%) and EL-SAWAF and SHALABY (1977) in Zagazig province (23%). This data was found to be lower than that of 55% and 40% as recorded by RAHA (1956) and LUNDGREN (1956) respectively.

The bacteria isolated from the genital tract of repeat breeder buffalo cows in the present study, were nearly similar to those obtained by EL-SAWAF et al. (1960), ZAKI et al. (1961) and BARAKAT, (1965). ZAKI et al. (1962) and RADOSLAVOV, (1975) proved the presence of the same organisms in the genital tracts of infertile cows. So it could be possible that there was no difference between the types of bacteria isolated from the genital tracts of cows or that of buffaloes. It was of interest that many authors like EASLEY et al. (1951); DAWSON, (1960); BARAKAT, (1965); ABO EL-ATA (1973) and AWAD et al. (1977) reported similar results from cows and buffaloe cows suffering from endometritis. There were several bacteria (Gaffica, coliforms, and micrococcus) were isolated from normal uterus. The presence of these bacteria could be considered as normal flora of the genital organs. Also, the isolation of C.pyogenes, klebsiella, staphylococci and unclassified corynebacterium from diseased breeders were considered pathogenic as they were isolated only from buffalo cows suffered from repeat breeder. THYGESSEN (1948) and RASBECH (1954) isolated C.pyogenes from repeat breeder cows. According to our finding (staphylococci, —haemolytic streptococci and klebsiella) were similar results obtained by ABO-EL-ATA (1973) and AWAD et al. (1977).

Gaffica micrococcus, E.coli, coliform and Anthracocids were isolated at the same percentage in both normal and repeat breeder. These strains seemed to be commensals normal flora in the genital tract and might cause
disease with other organisms under adverse condition of genital tracts (BARAKAT, 1965).

Analysis of the results in this study indicated that the single and mixed infections among repeat breeder
were higher between the cases in the villages than between that in Governmental farms. This might show the
importance of using proper hygienic measures during and after birth which was more applied in farms than in Villages (ROBERTS, 1971).

REFERENCES

tion of pathogenic microorganisms, the C.V. Mosby Company, Saint Louis.
Company, Baltimore.
Government.
**BACTERIOLOGY REPEAT BREEDER BUFFALO COWS**

Table (1): The distribution of infected and non-infected cases from control and repeat breeder buffalo-cows.

<table>
<thead>
<tr>
<th></th>
<th>No. of Buffaloes</th>
<th>Infected</th>
<th>Non-infected</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>%</td>
<td>No</td>
</tr>
<tr>
<td>Control group</td>
<td>36</td>
<td>30</td>
<td>83.84</td>
<td>6</td>
</tr>
<tr>
<td>Repeat breeder group:</td>
<td>91</td>
<td>82</td>
<td>90.11</td>
<td>9</td>
</tr>
<tr>
<td>Farms</td>
<td></td>
<td>100</td>
<td>91.74</td>
<td>9</td>
</tr>
<tr>
<td>Villages</td>
<td></td>
<td>236</td>
<td>212</td>
<td>24</td>
</tr>
</tbody>
</table>

Table (2): The distribution of single and mixed infection among repeat breeder buffalo cows in farms and Villages.

<table>
<thead>
<tr>
<th>Bacteriological condition of infected genitalia</th>
<th>Control group El-Hawatka farm</th>
<th>Repeat breeder groups</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>El-Hawatka I</td>
<td>El-Hawatka II</td>
<td>Total</td>
</tr>
<tr>
<td>Single infection</td>
<td>12</td>
<td>25 18 43 6 35</td>
<td>84</td>
</tr>
<tr>
<td>Mixed infection</td>
<td>18</td>
<td>13 17 30 3 65</td>
<td>96</td>
</tr>
</tbody>
</table>

Table 3: The distribution of isolated bacteria from control and repeat breeder buffalo-cows.

<table>
<thead>
<tr>
<th>Control breeder</th>
<th>Group I El-Hawatka</th>
<th>Group II El-Hawatka</th>
<th>repeat breeder from El-Hawatka</th>
<th>Repeat breeder from Agriculture School</th>
<th>Repeat breeder from Assiut and Abutig</th>
<th>Total repeat breeder</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.of isolates</td>
<td>%</td>
<td>No.of isolates</td>
<td>%</td>
<td>No.of isolates</td>
<td>%</td>
<td>No.of isolates</td>
</tr>
<tr>
<td>Micrococcus spp.</td>
<td>10</td>
<td>20.84</td>
<td>9</td>
<td>17.85</td>
<td>6</td>
<td>11.11</td>
</tr>
<tr>
<td>Gaffica</td>
<td>4</td>
<td>8.33</td>
<td>-</td>
<td>2</td>
<td>3.92</td>
<td>-</td>
</tr>
<tr>
<td>Pathogenic staphylococci</td>
<td>-</td>
<td>1.85</td>
<td>1</td>
<td>0.95</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>E-Naemolytic streptococci</td>
<td>-</td>
<td>12.38</td>
<td>1</td>
<td>8.33</td>
<td>9</td>
<td>5.41</td>
</tr>
<tr>
<td>X-Naemolytic streptococci</td>
<td>8</td>
<td>14.29</td>
<td>1</td>
<td>8.33</td>
<td>11</td>
<td>6.63</td>
</tr>
<tr>
<td>C-pyogenes</td>
<td>2</td>
<td>2.86</td>
<td>-</td>
<td>2</td>
<td>1.91</td>
<td>-</td>
</tr>
<tr>
<td>Unclassified corynebacteria</td>
<td>-</td>
<td>3.92</td>
<td>1</td>
<td>1.85</td>
<td>3</td>
<td>2.86</td>
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<tr>
<td>E-coli</td>
<td>3</td>
<td>7.62</td>
<td>1</td>
<td>8.33</td>
<td>11</td>
<td>6.63</td>
</tr>
<tr>
<td>Para colon group(Otiform)</td>
<td>4</td>
<td>9.26</td>
<td>5</td>
<td>4.76</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Klebsiella spp.</td>
<td>3</td>
<td>5.88</td>
<td>3</td>
<td>5.56</td>
<td>6</td>
<td>5.71</td>
</tr>
<tr>
<td>Ps.aeruginosa</td>
<td>-</td>
<td>9.26</td>
<td>5</td>
<td>4.76</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Anthracosid</td>
<td>15</td>
<td>31.25</td>
<td>2</td>
<td>7.41</td>
<td>6</td>
<td>5.71</td>
</tr>
<tr>
<td>Proteus spp.</td>
<td>-</td>
<td>11.76</td>
<td>4</td>
<td>7.41</td>
<td>10</td>
<td>9.52</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>51</td>
<td>54</td>
<td>105</td>
<td>12</td>
<td>166</td>
</tr>
</tbody>
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