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SURGICAL HANDLING OF LUMPY SKIN DISEASE IN COWS (With 7 Fig.)

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المعالجة الجراحية لمرض الجلد العقدي في
الأبقار

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تم فحص ٦٣ حيوان من الأبقار التي كانت ترد الى مستشفى كلية الطب البيطري بادفينا والتي كانت تعاني من مرض الجلد العقدي وقد تعرضت هذه الحيوانات الى الفحص الاكلينيكي لتسجيل الأعراض وكذلك المضاعفات الجراحية الناتجة عن المرض . وقد تم معالجة بعض المضاعفات جراحيا وأيضاً باستخدام العلاج الطبي وقد وجد أن بعض هذه المضاعفات تنشأ لوجود العقد الجلدية في بعض الأماكن على الجسم مثل المفاصل ، الضرع وحول العين .

SUMMARY

63 cows were collected from the clinical cases presented to the clinic of the Fac. of Vet. Med., Edfina. The animals were affected with lumpy skin disease. The affected cows were subjected to clinical examination followed by recording the symptoms and the most possible complications of the disease. Surgical handling of lumpy skin disease complications as well as medical treatment were also discussed in the present work.

INTRODUCTION

Lumpy skin disease is a highly infectious skin disease of cattle caused by a virus. It is characterized by sudden appearance of nodules on all parts of the skin (BLOOD and HENDERSON, 1979).

The cause of the disease is a Neething virus, genus Capripox virus in the family poxviridae. (ANDREWS; PEREIRE and WIDLY, 1978; KAHRS, 1981 and EL-KANAWATY, (1989).

All age groups of cattle were equally affected. Severely affected cattle showed a rise of body temperature, depression, lacrimation, nasal discharge, salivation and lameness. Firm rounded nodules were seen in all parts of the body ranging in size from 0.5 to 5 cm in diameter (ALI and OBEID, 1977).

In some cases where the nodules are present at the level of a joint, it leads to septic arthritis while in other cases the udder was subjected to septic mastitis when the nodules were present on the udder (ISMAIL, 1989).

The present work aimed to study the clinical symptoms as well as the most possible complications of the disease with special reference to possible treatments.

MATERIAL and METHODS

The present study was carried out on 63 cows presented to the clinic of Fac. Vet. Med., Edfina, Alexandria Univ. The disease was observed in the period from January to August (1989). The recorded cases of lumpy skin disease were observed in all ages and in both sexes. The diseased animals suffered from firm rounded nodules distributed all over the body of the animals.

The affected animals were subjected to clinical examination, followed by recording the complications of this disease. Surgical trials and medical treatment were performed in severely affected cows.

RESULTS

During clinical examination, it was found that affected animals showed a rise in body temperature (40°C to 41°C). In addition to that, loss of appetite, salivation, lacrimation, Nasal discharge and lameness were detected in affected animals.

Enlargement of superficial lumpy nodes and oedema of dependent areas, particularly the limbs, dewlap and brisket were observed. The animals become depressed and somewhat emaciated.

Multiple skin nodules:

Appeared distributed all over the body. The skin nodules were usually rounded, firm, varying from 1 to 7 cm. in diameter and varying in number from a few to hundreds. The skin nodules were observed over the skin of all affected cases, and the more common affected parts were over the skin of the neck, back, abdominal wall, thighs, legs, perineum, udder and face specially around the eyes, Fig. 1. No specific treatment

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was available, but prevention of secondary infection is essential. The use of antibiotics, Dextrose 5% and Novalgin were recommended.

In some advanced cases, the nodules disappeared but they persisted as hard dry scabs for several weeks before falling off. Ulcer formation and severe necrosis of the exposed underlying tissues as a result of sloughing of skin specially in shoulder and hip region. The affected animals were unable to walk and were usually in lateral recumbency, Fig. 2 and 3. Surgical treatment of the affected parts were performed by removal of the necrotic tissues, washing with hydrogen peroxide, touching with tincture of Iodine 3% and using terramycine ointment as a local antibiotic.

In some cases the nodules were developed on the conjunctiva and the skin over the eyelid, causing severe lacrimation and blepharo-conjunctivitis, Fig. 4.

In other cases where the nodules were present over the skin of udder and teat, the necrosed parts of the skin sloughed off leading to a teat fistula, Fig. 5. In such a condition surgical trial was performed to treat the teat fistula.

In certain cases where the nodules and skin necrosis are present at the level of the joint, it lead to septic arthritis. The more common affected joints are the joints of the pelvic limb. The affected animals showed severe lameness. Septic arthritis is formed due to invasion of secondary bacteria through an opening resulted from sloughing of the necrosed patches of skin, Fig. 6 & 7. The affected animals were treated locally with hydrogen peroxide, cod liver oil and penicillin injection.

DISCUSSION

In the present study, severely affected animals showed a rise of body temperature, lacrimation, nasal discharge, salivation and lameness. The most characteristic lesions of lumpy skin disease were the skin nodules. These are in agreement with ALI and OBEID (1977), BLOOD and HENDERSEN (1979) and EL-KANAWATY (1989).

In some advanced cases the nodules disappeared and they persisted as hard dry scab for several weeks before sloughing off. Ulcer formation and severe necrosis of the exposed underling tissues as a result of sloughing off the skin took place. These complications also recorded by KAHR (1981) and BLOOD & HENDERSON (1979).

Septic arthritis as a complication of lumpy skin disease, was attributed to secondary bacterial invasion through the opening resulted from sloughed necrosed skin patches in the neighborhood of the joints. It usually affected the joints of the pelvic limb specially the joints of the lower extrimeties where the skin covering these joints are covered by a few musculature, so the infection can easily penetrate and destroy the joint capsule leading to septic arthritis. These complications are in agreement with ISMAIL (1989).

In the present study the nodules were restricted to the dermis and epidermis of the skin of the eyelids and their effect was reflected on the conjunctiva to be inflamed resulting in blepharo-conjunctivitis.

Also, such lesions may end by teat fistula when the nodules were presented at the skin over the teat and udder.

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LEGENDS

- Fig. 1:** Showing the characteristic nodules of lumpy skin disease in cows.
- Fig. 2:** Showing sloughing of skin patches and ulceration at the shoulder and elbow region.
- Fig. 3:** Showing sloughing of the skin and deep necrosis of the muscles of hip region.
- Fig. 4:** Showing the nodules around the eye and over the eyelid.
- Fig. 5:** Showing sloughing the skin over the teat (teat fistula).
- Fig. 6 & 7:** Showing septic arthritis of the joints.

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