

Combined surgical and medical treatment in clinical cases of hemorrhagic septicemia in buffaloes suffering from dyspnea and suffocation

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Abstract

A series of sixty Iraqi buffaloes (*Bubalus bubalus*) suffering from dyspnea and suffocation due to acute hemorrhagic septicemia were treated by a combined of surgery (tracheostomy) and medicine (antibiotic therapy) to save their lives became alert and completely healed with granulation tissue at the site of the operation, that forty six buffaloes lives (76.66%) due to the treatment, while 14 buffaloes died.

تعاقد العلاج الجراحي و الطبي في الجاموس المصاب سريريا بمرض عفونة الدم النزفية والذي يعاني من صعوبة التنفس والاختناق

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الخلاصة

شمل البحث ستون جاموسا عراقيا (*Bubalus bubalus*) الذي يعانون من صعوبة التنفس والاختناق نتيجة الإصابة بمرض عفونة الدم النزفية الحاد. تم علاجها جراحيا (بشق الرغامى) وطبيا (مضادات حيوية) لأجل إنقاذ حياتهم حيث أصبحت سليمة سريريا باختفاء الأعراض التنفسية وشفيت تماما بتكوين النسيج الحبيبي وإنقاذ حياة ست واربعون جاموسا (76.66%) بينما نفق أربعة عشر جاموسا فقط.

Introduction

The domestic buffalo is a farm animal neglected by government and private researchers (1). Hemorrhagic septicemia (HS) is one of the many infectious diseases diagnosed clinically and proved by laboratory isolation especially in buffaloes in south of Iraq (2,3). Buffaloes are highly susceptible to HS and shows more severe illness and signs as compared to cows with stress playing a role in the occurrence of the disease (heat, transportation). The disease is mostly characterized clinically by sudden onset of fever, severe depression, warm painful swelling in the throat, dewlap and brisket regions causing severe dyspnea and leading to death due to suffocation (3). Up to as 5% of the population could be carriers of the disease in endemic areas (4, 5, and 6). Such above mentioned cases treated by the medical approach only (antibiotics) had poor survival rates and the lives of the animal were not saved.

The aim of this research was to introduce the surgical approach combined with the medical approach (antibiotics) in order to save the lives of the buffaloes affected by HS.

Materials and methods

Sixty buffaloes (*Bubalus bubalus*) (40 buffalo's calves+ 20 adult buffalos) suffering from acute HS (diagnosed clinically) was treated belonging to eight villages (Qurna, Medaina, Dair, Shafi, Sweeb, Abowawi, Alnaser, Alsharta...) northern of Basrah governorate. The cases occurred between months August-November. The major clinical signs were severe dyspnea (opened mouth, exhausted breathing, recumbence and edema in the neck region which may lead to suffocation). Due to the emergency of the cases treachestomy by remove oval pice included 2-3 rings of cartilage from trachea which performed immediately in order to save their lives as follow: the site of the operation was prepared for surgery, local anesthetic was lidocaine 2% in dose of 1ml for each cm³, at the site of operation by linear infiltration, the incision was done between the upper and middle third of the neck till exposure of the trachea, then a suitable rubber tube was introduced in the trachea and fixed in place (7).

Oxytetracycline 10%, 15 mg\ Kg B. W. was used for 7-10 days (7). The surgical approach was followed up for 14 days after surgery with good nursing till improvement and healing occurred.

Results

The Hemorrhagic septicemia cases in buffaloes showed the following clinical signs, fever (40.5-42.2 °C), anorexia, salivation, edema of the neck varying in degrees in the submandibular region and may extend to the brisket region in some animals, open mouth breathing, sever dyspnea leading to suffocation and death.

Fourteen (23.33%) buffaloes died during preparation for the surgery because they were in the late stages of the disease and suffocating. All the 14 dead (not treated) buffaloes were calves.

Table (1) it can be seen that out of 60 buffaloes included in this research, the lives of 46 (76.66%) were saved (26 calves and 20 adults). During the 14 days of nursing and watching the 46 buffaloes showed improvement in their appetite, disappearance of respiratory distress, animals became alert and complete healing with granulation tissue at the site of the operation.

The Post mortem changes of the 14 dead buffalo's calves were generalized congestion of the entire organs, petichial hemorrhages especially on the trachea and lungs; also lymph nods enlargement, and subcutaneous edema.

Table (1) The combined (treachestomy and Oxytetracycline 10%) treated results

Buffalo		Compound treated		Non treated	
Calves 40	Live	26 (43.33%)		0 (0%)	
	Dead		0 (0%)		14 (23.33%)
Adults 20	Live	20 (33.33%)		0 (0%)	
	Dead		0 (0%)		0 (0%)
Total 60	Live	46 (76.66%)		0 (0%)	
	Dead		0 (0%)		14 (23.33%)

Discussion

As recorded by authors (2, 3) that HS occurs during periods of environmental stress, the present 60 clinical cases occurred during a period of stress (heat) in Basrah during months of August-November and the buffaloes displayed the clinical signs mentioned previously as well as the severe throat and neck edema, which could be due to the endotoxin produced by the causative agent (8, 9).

Tracheostomy in cows affected by HS had reduced the mortality rate in such animals (3). As this technique is used routinely in human in emergencies (10), it was only mentioned by (11) that the combined between the surgical and medical approach could save the lives of buffaloes affected by throat obstruction. This technique was applied on buffaloes with throat obstruction due to HS in this research and resulted in a surviving rate of 76.66%, the role of Oxytetracycline for 7-10 days was to restrict the previous infection and prevent infection following the operation since such bacteria can survive for days in moist soil and water (12, 13, 14 and 15), taking in consideration that moisture and water are important parts of the ecology of the buffaloes and their places of living. The 14 buffalo calves they died were not due to fault in the technique but were all in the late stages of suffocation. Reviewing the Iraqi literature on veterinary surgery, this is the first report on such type of combined surgical and medical treatment on buffaloes in Iraq, which gave a good survival rate of 76.66% and was not difficult in application, therefore it can be recommended as a life-saving technique in cases of emergencies in buffaloes or other animals under threat of death due to HS or other air obstructing diseases or conditions.

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