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Clinical Article

CRANIAL ABSCESS WITH DEPENDING PART IN MEDIAL CANTHUS OF THE EYE IN A BUFFALO CALF- A CASE STUDY

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SUMMARY

This case report describes clinical examination and therapeutic outcome of a 1 month old buffalo calf, suffering from cranial abscess on left side of the head with dependent part in the medial canthus of the eye. Calf was treated with medicines for 5 days and local application of weak povidone iodine solution for 1 week. The abscess was subsequently drained manually, and flushed with gentamicin antibiotic. After completion of selected intervention, calf recovered fully.

Key Words: Abscess, calf, gentamicin**,** mucopurulent discharge, supra-orbital

Abscess is a collection of pus in confined tissue spaces, usually caused by bacterial infection. Signs and symptoms of abscesses include redness, pain, warmth, and swelling or constitutional symptoms (if abscesses are deep). The swelling may feel fluid-filled when pressed (*Singer et al., 2014)*. The area of redness often extends beyond the swelling (Mosa *et al*., 2010). They are usually caused by a bacterial infection (Qadissiyia, 2012). Often many different types of bacteria are involved in a single infection (Mosa *et al*., 2010). Clinically, animals have a much greater proportion of abscesses in the head region, related possibly to superficial injury during browsing and the nature of grasser which have the high property of prickly plant, wound in the skin or oral mucosa may result from puncture by thorny vegetation (Mosa *et al*., 2010). Abscesses in other body locations occur secondary to trauma as a result of fighting between animals, contamination of injection sites, and any injurious conditions. The organism gains access to the body through contaminated abrasions or wounds and the infection may remain localized in the form of a subcutaneous abscess with inflammation of the draining regional lymph nodes (Stephen *et al*., 2010 and Qadissiyia, 2012).

Diagnosis of a skin abscess is usually made based on what it looks like, and is confirmed by cutting it open (*Singer et al., 2014)*. Abscesses may also develop in internal body organs such as the lungs or liver, if the organisms enter the blood stream (Gezon *et al.,* 1991). Most subcutaneous abscesses result from traumatic skin penetration with resulting infection for example facial subcutaneous abscesses are common in cattle eating roughage containing foxtail grass (*Hordeum jubatum*), several animals in a herd may be affected at one time, the awns of these plants migrate into the cheek mucosa, causing subcutaneous abscesses (Radostits *et al*., 2007). The *Corynebacterium, Staphylococcus, Streptococcus, Pasteurella, Escherichia coli,* and other gram-negative rods, *Peptostreptococcus anaerobius and Eubacterium tortuosum* were isolated in external and internal abscesses goats (Tadayon *et al.,* 1980).

A buffalo calf of one month age was presented at Teaching Veterinary Clinical Complex, International Institute of Veterinary Education and Research (IIVER) Rohtak Haryana, with history of anorexia, fever, and swollen area on top of the left side of head. After the clinical observations and complete anamnesis from owner, it was confirmed and diagnosed as abscess, as the swollen area was soft, hot, painful and pitted on pressure. Pus oozed out through dependent area near supraobital fossa and through medial canthus of the eye when pressure was applied on that abscess during drainage (Figure 01A, B).

After complete evaluation of buffalo calf clinically as well as by physical observations, abscess was found on left side of the head near supraorbital fossa, dependent part of abscess was located towards medial canthus of eye. The distribution of subcutaneous abscesses depend on body anatomical location, in cattle, there are a great variety in sites of infection, in spite of most abscesses developed on head region (facial subcutaneous abscesses) which were most commonly affected, followed by neck and chest regions at percentages 80.36, 8.92, and 10.71%, respectively (Tuffyli *et al*., 2012). On palpation of abscess, it was painful, hot and soft. After application of gentle pressure on abscess, pus oozed out through the dependent part of abscess near supraorbital fossa as well through medial canthus of the eye which indicated presence of pus in sinus of skull as supraorbital fossa communicates with eye orbit through sinuses of skull. It is well understood fact that drainage of abscess is first and foremost therapeutic step to treat successfully the abscess along with parental administration of other therapeutic agents. Five days of complete treatment protocol includes enrofloxicin 4ml IM, Avil 1.5 ml IM, meloxicam 2ml IM, vitalgin 1ml IM with supportive fluid therapy of 200ml normal saline parentally and flushing of abscess with gentamicin antibiotic (Figure 01 C). The calf showed substantial recovery with physiological vitals like temperature (101.2

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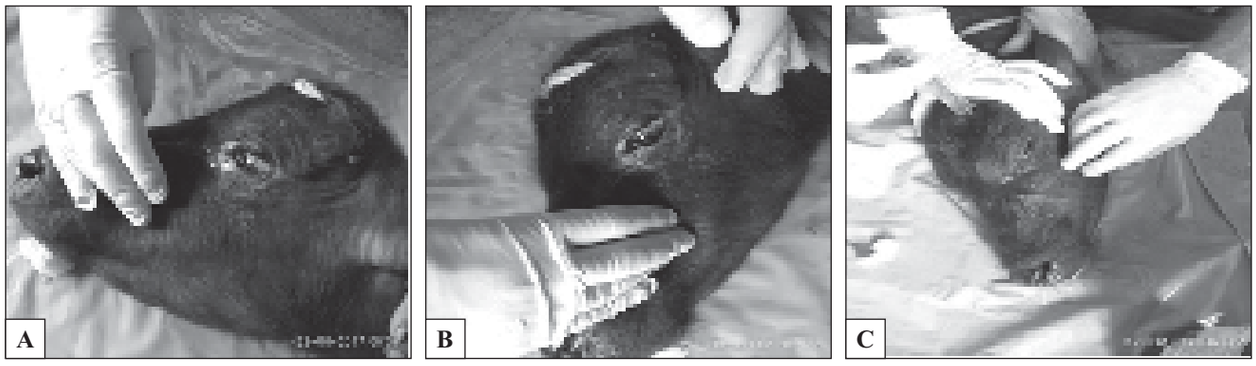

Fig. A-C: One month old buffalo calf showing thick, creamy pus draining through the opening on the orbital bone (A). Medial canthus of the eye on pressure (B). With subsequent drainage of the sinus containing pus with gentamicin antibiotic (C).

F), respiratory and heart rate tapering towards normality.

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