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Vulval abscess and its successful treatment in a captive Sloth bear (*Melursus ursinus*)

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Abstract
In Agra Bear Rescue Facility, an adult female bear showed severe reddening with bulged vulva even after completion of oestrus period and also exhibited difficulties in sitting in dog sitting posture, in passing urine and a cautious walk. The detailed clinical examination was performed after tranquilization of the bear with xylazine and ketamine. The examination of the right side vulval lip showed an abscess and further confirmed that there was no prolapse of either the vagina or the uterus. The pus was drained aseptically to send for bacterial culture and antibiotic sensitivity test. Surgical management for the abscess was undertaken. The culture examination revealed coagulase positive *staphylococcus.* Based on the antibiotic sensitivity test, the bear was treated with Amoxycillin-clavulanic acid tablets and anti-inflammatory medication. The post operative recovery was good and the animal was released out of observation after two weeks.

Keywords: ABST, Abscess, Sloth bear, *Staphylococcus*, and Vulval lip.

1. Introduction
The sloth bear (*Melursus ursinus*) belongs to family Ursidae and is endemic to the Indian subcontinent [5]. The adult female sloth bears in the Indian subcontinent come into oestrous between the months of May- July and exhibit the estrous sign with typical enlargement of vulval lips (figure1). In human beings the vaginal flora is maintained by the lactobacilli and it plays important protective and probiotic role to prevent vaginal infection by producing antagonizing compounds [15]. Though several clinical conditions in sloth bears, such as carcinoma, fibroepithelial polyp in peri-anal region, Enterotoxaemia, pasteurellosis and balanoposthitis have been recorded by different authors [1, 6, 7, 8, 10, 14], there is no information on reproductive conditions/disorders observed in female sloth bears.
An abscess is an enclosed collection of liquefied tissue, known as pus, somewhere in the Body. It is the result of the body'sdefensive reaction to foreign material [19]. The present report describes the clinical case of vulval abscess in an adult female rescued sloth bear and isolation of coagulase positive *staphylococcus* organism from the pus culture and the treatment for same as per the antibiotic sensitivity test.

2. Materials and Methods
An adult female sloth bear (Name – Chingari; Microchip Number 958000000526267; Age 13 years; Body weight 100 Kg) at Agra Bear Rescue Facility was found with a severe reddish bulge below the tail, difficulty in urination, difficulty in sitting (dog sitting posture) and cautious walking. The animal was tranquilized for detailed clinical examination using a ketamine-xylazine combination [12] ; ketamine hydrochloride 5 mg/kg body weight (Ketamil®, Troy laboratories Pty Ltd., Smithfield, NSW, Australia) and xylazine hydrochloride 2 mg/kg body weight (Xylazil®, Troy laboratories Pty Ltd.). The vital parameters were recorded, the temperature being 38.7 °C, heart rate - 70 beats per minute and the respiratory rate 12 per minute. The blood sample was obtained from jugular vein puncture and was sent for a detailed hematological and biochemical analysis.
The examination of the external genitalia revealed sever reddish soft swelling with fluid on the right vulval lip (figure 2) suggesting abscess. Gentle probing of vaginal canal performed by inserting the index finger after lubrication to ensure there is no abnormality such as vaginal or uterine prolapsed and vaginal neoplasia such as fibromas or leiomyomas [4].

The pus sample from the abscess were collected aseptically by aspiration with syringe (figure 3) and collected in sterile container with swab and sent for microbiological examination and antibiotic sensitivity test. The abscess was further drained surgically by making a small incision on the dependant part of the abscess [19] (figure 4) and around 75ml of pus from the abscess cavity was evacuated. The abscess cavity was further flushed with antiseptic solution (Povidone iodine & Metranidazole) and dressed with fly repellant ointments.

Fig 1: Enlarged vulval lips in estrous condition in sloth bear

Fig 2: Sever reddish soft swelling on the right side vulval lip

Fig 3: A septic collection of pus from the abscess for microbiological analysis.

Fig 4: Surgical darning of access

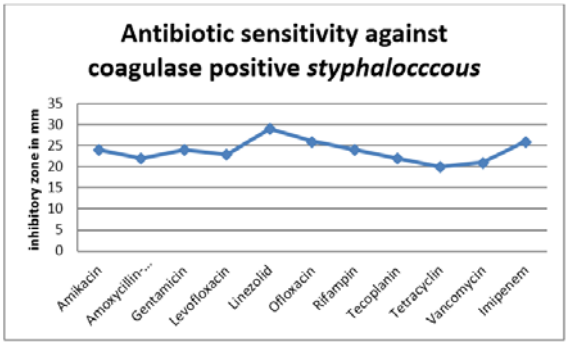

Fig 5: Antibiotic sensitivity against coagulase positive *styphalocccous*

3. Result

The color and consistency of the pus seemed to be that of septic pus [19]. Hence the condition was confirmed as a localized abscess in vulval lip. The microbiological examination by bacterial culture method revealed presence of coagulase positive *staphylococcus* organisims. The antibiotic sensitivity test revealed more sensitivity to Amikacin, Amoxycillin- Clavulanic acid, Gentamicin, Levofloxacin, Linezolid, Ofloxacin, Rifampin, Tecoplanin, Tetracyclin, Vancomycin and Imipenem, while it was resistant to Azithromycin, Ceftriaxone, Chloramphenicol, clindamycin, fosfomycin, fusidic acid, Ertapenem, Kanamycin, Lincomycin, Oxacilin, Pristinomycin, Penicillin-G, Sulfamethoxazole, Ticarcillin-Clavulonic acid, Tobramycin, Tigecycline Hematological examination revealed mild elevation in neutrophils 85%, low lymphocytic count and a mild elevation in the platelet count. Serum biochemical examination revealed high LDH.

4. Treatment and discussion

The animal was kept inside the den for further observation and postoperative care. The treatment provided with Amoxycilin-clavulanic acid (Antibiotic) tablet orally twice daily with food along with anti-inflammatory tablet for seven days and topical dressing was done with ofloxacine liquid by spraying from the distance till complete healing. The complete healing was recognized on 13th day and the animal was released in to the enclosure on 14th day.

Hematomas (which contains coagulated blood and serum) and cysts also cause a similar type of swelling. Hence the differential diagnosis is more important. To confirm differential diagnosis, exploratory puncture may be made to find out the nature of the content. If the abscess is not drained properly and treated with suitable antibiotic it will lead to the condition called “antibioma” in which there will be fibrosis around the abscess cavity and fluids in it may get absorbed making the pus inspissated [19].

The result obtained by microbilogical examination by bacterial culture method revealed the presence of coagulase positive *staphylococcus* organisims which are sensitive to Amikacin, Amoxycillin- Clavulanic acid, Gentamicin, Levofloxacin, Linezolid, Ofloxacin, Rifampin, Tecoplanin, Tetracyclin, Vancomycin and Imipenem. These finding were in agreement with that of Nwankwo and Nasiru who found that Amikacin, Amoxycillin- Clavulanic acid, Gentamicin, Levofloxacin, Ofloxacin, Tetracyclin, and were sensitive against coagulase positive staphylococcus [11].

Styphalococci species produce various toxin including coagulase, fibronolysins, hyalurunidase, hemolysins (alfa, beta, gamma, delta), and enterotoxins, among others. Pyogenic infection of various organs and tissues particularly of the skin, mammary glands, lungs, joints, and uterus caused by *staphalococci* are seen on occasion in almost all species of animals. *S. aureus* is a hemolytic, coagulase positive organism that can cause a variety of purulent inflammatory diseases. In animals *S. aureus* is associated with purulent lesions of the skin (Pyoderma, furunculosis, impetigo), which on occasion may become disseminated [17].

Suppuration is usually caused by pyogenic bacteria like streptococci, staphylococci, Pseudomonas aeruginosa, E coli and some irritants such as turpentine, calomel and croton oil also can cause suppuration [19]. Chachra *et. al.*, reported Microbial identification, its antibiogram and therapeutic interventions in an elephant with multiple abscesses [3]. Vulvar abscess caused by *Bacteroides* sp. in dog reported by Sato [16]. Perirectal abscess in horse were reported by Torkelson [18]. Papapetropoulos *et. al.*, reported the pathogenic role of *Staphylococcus lugdanensis* and the importance of identifying coagulase –negative *staphylococci* to species level [13]. Kilpatrick *et al.*, reported vulvar abscess with celulitis and its surgical management and also stated that Methicillin-resistant *Stapylococcus aureus* (MRSA) was the most common isolate from vulvar abscesses [9]. Brook & Frazier reported the microbiology of perirectal abscesses in human patients[2].

5. Conclusion

Although there are sterile abscess most abscess are caused by infection thus causing accumulation of pus in the affected region. Abscesses commonly develop after a bite, scratches, or when objects like thorns penetrate the skin and the skin heals over. Proper treatment with suitable antibiotic is recommended after culture and antibiotic sensitivity to overcome the condition. Unless the abscess is treated properly with suitable antibiotic the skin will heal over again and abscess will redevelop. So periodical examination of external genetelia is more important, especially at the time of breeding seasons.

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7. References

1. Arun AS, Jadav KK, Ilayaraja S. Paraphimosis-induced balanoposthitis in a wild caught captive sloth bear (*Melursus ursinus).* Zoos' Print Journal 2005; 20(9):1997.
2. Brook, Frazier The aerobic and anaerobic bacteriology of perirectal abscesses. Journal of Clinical Microbiology.1997; 35(11): 2974–2976.
3. Chachra D, Kaur G, Chandra M, Vasudeva K, Gupta K, Sangwan V *et al*. Microbial identification, its antibiogram and therapeutic interventions in an elephant with multiple abscesses. Zoo's Print, Journal of Threatened Taxa 2013; 3(3):18-20.
4. Fenner WR. Quick reference to veterinary medicine, 3rd edition. Lippincott Williams and Wilkins Company, Philadelphia, 2000, 163-697.
5. Garshellis DL, Joshi AR, Smith JLD. Rice CG Sloth conservation action plan. In: C. Servheen and B. Peyton (Eds.) bears: status Survey and conservation action pan. IUCN, Gland, Switzerland, 1999, 255-240.
6. Gosselin SJ, Kramer LW. Extrahepatic biliary carcinoma in sloth bear (*Melursus ursinus*). Journal of American Veterinary Medical Association 1984; 85:1314-1316.
7. Harbola PC, Arora BM. Entertoxamia due to Clostridium perfringens type D in a sloth bear. Indian Journal of comparative Microbiology, Immunology and Infectious Diseases 1994; 15:42.
8. Ilayaraja S, Arun AS, Yaduraj K, Sanio J. An incidence of Benign Fibro Epithelial Polyp in a rescued dancing Sloth bears (*Melursus ursinus*). Indian Wildlife yearbook, 11&12, Association of Indian Zoo and Wildlife Veterinarians, Bareily, India, 2013, 61-64.
9. Kilpatrick CC, Alagkiozidis I, Orejuela FJ, Chohan L, Hollier LM. Factors complicating surgical management of the vulvar abscess. Journal of Reproductive Medicine 2010; 55(3-4):139-142.
10. Mehrotra PK, Mathur BBL, Sudhir B, Sheela C. A case of pasteurellosis in male sloth in at Jaipur Zoo Zoo's Print journal 1999; 14 (8): 91-92.
11. Nwankwo EO, Nasiru MS Antibiotic sensitivity pattern of Staphylococcus aureus from clinical isolates in a tertiary health institution in Kano, Northwestern Nigeria. The Pan African Medical Journal 2011; 8:4
12. Page CD. Sloth bear immobilization with ketamine-xylazine combination: reversal with yohimbine. J. Am. Vet. Med Assoc1986; 189:1050-1051.
13. Papapetropoulos N, Papapetropoulou M, Vantarakis A. Staphylococcus lugdunensis as a cause of abscesses in the perineal area. Infection 2013; 41(2):525-528.
14. Ranjan A, Nair TM, Valsala KV, Varghese K ,Sreekumaran G Cholangio cellular carcinoma in sloth bear (*Melarus ursinus*). Indian Veterinary journal 1990; 67:207-209.
15. Razzak MS, Al-Charrakh AH, Al-Greitty BH. Relationship between lactobacilli and opportunistic bacterial pathogens associated with vaginitis. North American Journal of Medical Science 2011; 3(4):185-92.
16. Sato Y. Vulvar abscess caused by *Bacteroides* sp. infection in a female dog. Japanese Journal of Veterinary Dermatology 2009; 15(4):187-190.
17. Thomas CJ, Ronalsd DH, Norval WK veterinary pathology. Sixth edition, Wiley-Blackwell, 1997, 431-432.
18. Torkelson J. Perirectal abscess, colic, and dyschezia in a horse. Canadian Veterinary Journal 2002; 43(2):127-8.
19. Venugopalan A. Essentials of veterinary surgery. 8th edition, IBH publishing Co. Pvt. Ltd, New Delhi, 2002; 95-101.