

**PAIN MANAGEMENT IN BURN PATIENT.**

Pain is an unpleasant sensory and emotional experience associated with potential or actual tissue damage or described in terms of such. There are some modern myths about pain in animal species; Animals don't feel pain, or feel pain less than humans. However, evidences have shown that the pain pathway in animals is very similar to humans, and moreover, behavioural changes in painful animals revert to normal when given analgesic.

A three year old male German Shepherd dog weighing 25kg was presented to the Veterinary Teaching Hospital of the College of Veterinary Medicine, Federal University of Agriculture, Abeokuta, Nigeria with the chief complaint of anorexia.

History revealed that the dog had been off feed for about three days prior to presentation and that there was an incidence of fire outbreak four days before presentation. The fire outbreak occurred in the absence of the owner. Clinical examination reveals that the dog was apparently alert and active. The vital parameters, rectal temperature, 38.60c; pulse rate, 104beats/minute and respiratory rate, 20 cycles/minute. Physical evaluation revealed pink ocular mucous membrane (normal), but slightly enlarged pre-scapular and popliteal lymph nodes. Also a flame burns of the skin of the dorsum from the cervical region (C<sub>1</sub> spine) through the trunk, terminating at the croup. There was also a thickened leathery brown-black eschar from the cervical region to the perineal area which was suspected to be infected due to the odour emanating from underneath the eschar. The burn was estimated as 27% of the Total Body Surface Area. The site was painful to touch, an attempt to remove the eschar from the body of the dog to expose the tissue underneath elicited a violent withdrawal with loud vocalization from the patient.

Venous access was secured at the cephalic vein. Lactated Ringer's solution was put up to flow at 10mlkg<sup>-1</sup>hr<sup>-1</sup>. Thereafter, patient received intravenous dexmedetomidine® (Vetoquinol, UK) at 1µkg<sup>-1</sup> and ketamine® (Rotexmedica, Germany) bolus at 5mgkg<sup>-1</sup> for induction, followed by CRI ketamine at 5µkgmin<sup>-1</sup> (Bednarski, 2006) for maintenance of anaesthesia. Analgesia was achieved with intravenous pentazocine (Sokar Healthcare UK Ltd) at 2mgkg<sup>-1</sup> and 20mls of 2% lignocaine HCL® (AstraZeneca, UK) administered by infiltration under the viable tissue around the burns. Ketamine infusion continued for 24 hours post wound debridement. Wound debridement lasted an hour. The patient was calm throughout the period of wound debridement and ate later the same day. The dog was discharge 24 hours later.

Fluid was administered to maintain homeostasis and patent line. The rate of flow of fluid was considered based on the level of dehydration and degree of burn. Lignocaine was used for pre-emptive analgesic intervention to produce local analgesia while dexmedetomidine and ketamine were used as analgesic adjunctive agents to produce neuroleptanalgesia. In addition, CRI ketamine was used to produce hypnosis in the patient during debridement and also produce analgesia post debridement. Multimodal approach to analgesia was instituted in this case to produce optimal analgesia.

In conclusion, animals feel pain and respond positively when treated with analgesic. The protocol provided optimal analgesia that made it possible to debride the burnt wound, returned normal appetite and hence restored healing process.