**Epidural Technique.**

In the epidural technique in cattle, local anaesthetic can be applied into the epidural space at the sacro-coccygeal junction (between the last sacral bone and Coccygeal bone 1) or between at the first intercoccygeal space (between Coccygeal bone 1 and 2). To locate this region the tail should be raised and lowered, to palpate and observe the movement and depression of the joint, particulary the depression between the spines of the two bones. The area should be shaved & disinfected before administering the anaesthetic, which is usually Lidocaine 2%.

A 5 cm 18-20 gauge needle should be directed at about 45-60 degree angle, ventrally and cranially into the space at the junction of the two bones. If bone is hit, the needle should be redirected, to enter into the epidural space. One may feel a ‘pop’ which indicates that the connective tissue sheath covering the nerve has been punctured by the needle, and thus the needle has entered the epidural space.

To test if one is in the epidural space, a bubble can be made inside the syringe, and if little resistance is used to push the anaesthetic into the space, without the bubble becoming smaller, the needle is in the correct space.

Another technique is the hanging drop technique where a few drops of anaesthetic is placed in the hub of the needle, and when the space is entered, the hub of the needle will be emptied as the lidocaine enters the empty space. Once one is sure they are in the space, the syringe can be screwed on and the correct volume of local anesthetic can be administered to the animal. Within 5 minutes, the tail of the animal should become flaccid, with little to no tail tone and motility. This area can be tested for desensitization by poking a needle on the tail.

**Procedure in lab**

In the lab, the upper region of the tail was shaved using a clipper, and wiped with an alcohol swab and the tail was raised and lowered to visualize and palpate the sacro-coccygyeal junction, as well as to feel the initial tail tone. The needle was directed under the skin of the cow at a 45-degree angle, then slowly directed into the epidural space. The hanging drop was successfully done, and the no resistance technique was felt by each group member. Slowly, the anaesthetic was administered into the epidural space, at 2:35 PM. After 5 minutes elapsed, a needle was used to prick the tail, until blood was seen, and the animal gave no reaction to this. Also, the perineal area was gentle priced with the needle, and also, no reaction was given to this.