**Complications**

After careful observation and analysis during and after the surgery, there were two significant points of complication for this procedure, **ruminal bloat** and the **location of the incision** and **hypothermia.**

**Ruminal bloat** - It was brought to the attention of the students that the sheep were accidentally fed despite notices being placed to alert the staff not to. As a result of this, there was ingesta in the rumen, causing progressive development of ruminal bloat as the rumen microbes ferment the forage. Furthermore, under anaesthesia and in lateral recumbency for the duration of the procedure, there could’ve have only been little to no evacuation of the ruminal gas.

The rumen would gradually increase in size and this would lead to some increase in difficulty in examining the abdominal organs since the increase in size would cause displacement of other organs e.g. small intestines, caecum, liver within the abdominal cavity that causes protrusion of viscera out of the laparotomy incision.

Additionally, once there has been satisfactory exploration of the internal abdomen and it was time to close the suture, it was very difficult because the gas build-up progressed from being localized to the rumen to migrating into the small intestines. This presented the team with the difficult task of suturing the abdominal muscles without puncturing the thin-walled small intestines as we tried to contain them inside the abdominal cavity.

**Location of the incision** – At the start of the procedure, it was instructed that the incision be made in the right flank, with the top of the incision being approximately 2cm away from the lateral processes of the lumbar vertebrae and the base of the incision at the base of the hole of the surgical drape placed on the patient. While these instructions were adhered to, the cut was made a few centimetres too caudal, closer to the cranial aspect of the promixal hindlimb. This not only minimally increases the difficulty of the exploratory laparotomy as this placement of the incision prevents the greatest ability to palpate the more cranial abdominal organs e.g. liver and the diaphragm but it can also lead to some trouble during the post-op healing process, as the proximal hindlimb would constantly hit the sutured surgical wound, causing pain to the patient.

**Hypothermia** – As a result of the abdominal viscera being exposed to the lower than normal temperature of the operating room for a prolonged period of time, the patient’s thermoregulatory mechanisms may have been compromised. This may come as a result of the vascular networks within and surrounding the viscera being directly in contact with the cold air, as the peripheral vessels would if the animal was in a cold environment. This convective heat loss, coupled with conductive heat loss during the procedure, notably the heat transfer from the patient to the metal operating table, would cause an overall decrease in body temperature. This would cause the circulation of blood at a lower than normal temperature, leading to hypothermia which would present as shivering and cold extremities (ears, feet, tail) which occurred in the final stages of the procedure.