

# **SUMMARY AND CONCLUSIONS**

The present study was conducted in twenty adult she-buffaloes confirmed to be suffering from traumatic reticuloperitonitis. In all these animals laparorumenotomy was performed under local anaesthesia using standard surgical technique. The foreign bodies were recovered from reticulum in all the cases. Out of twenty clinical cases, nineteen were divided into two groups (A and B) depending upon plasma chloride concentration and evidence of abomasal reflux. One case had highly abnormal findings and so was not included in any of the group.

Group A included ten TRP cases which were hypochloraemic with evidence of abomasal reflux. Group B included those nine TRP cases which were not hypochloraemic and there was no evidence of abomasal reflux.

Postoperatively, all the animals received Novalgin, Streptopenicillin, vitamin B complex with liver extract, and yeast culture. Five liters of 2.7% saline solution with 5.0g of potassium

chloride was administered intravenously immediately and 24 hours after surgery.

Parameters investigated were: rectal temperature, heart rate, respiratory rate, ruminal movements, Hb, PCV, TEC, TLC, DLC, blood glucose, total plasma protein, plasma concentration of sodium, potassium and chloride. Buffering capacity, pH, chloride concentration and protozoal motility of rumen fluid.

In group A, rectal temperature, heart rate, respiratory rate were normal preoperatively as well as postoperatively. Preoperatively, ruminal movements were reduced which improved slightly at 48 hours of surgery. In one animal extrareticular abscess was drained. Rumenoreticular adhesions were found in all the ten animals. Ruminal contents were watery with flakes in six cases, dry in two cases and normal in remaining two cases. Atrophy of ruminal papillae was observed in seven cases. Abomasum was found impacted in four cases.

Preoperatively, packed cell volume was higher. It decreased, but remained slightly higher than normal at 48 hours of surgery. All other haematological parameters were normal pre- and post-operatively except neutrophils which were higher preoperatively and became normal after 48 hours of surgery. Plasma concentration of sodium, potassium and chloride were lower than normal preoperatively and these were within normal range at 48 hours of surgery. Total plasma protein and blood

glucose were within the normal range pre- and post-operatively. Buffering capacity and pH of rumen fluid were lower than normal while its chloride concentration was higher than normal. Protozoal motility was not satisfactory.

In group B animals, rectal temperature and heart rate were normal pre- and post-operatively. Respiration rate was slightly higher preoperatively, but it was within normal range at 48 hours of surgery. Preoperatively, ruminal movements were slightly reduced which increased marginally after 48 hours of surgery.

Packed cell volume was higher preoperatively, but it returned to normal range at 48 hours of surgery. All other haematological parameters except neutrophils were normal pre- and post-operatively which was slightly higher preoperatively and became normal at 48 hours of surgery.

Adhesions of rumen with peritoneum were present in three cases while reticular adhesions were present in all the cases. Ruminal contents were watery with flakes in two cases, dry and frothy (in one case each) and normal in rest of the five cases. Atrophy of ruminal papillae was observed in two cases.

Preoperatively, plasma potassium concentration was lower in all the animals which came to normal limits after 48 hours of surgery. All other biochemical parameters were normal pre- and post-operatively. Chloride concentration, buffering

capacity and pH of rumen fluid were normal in all the animals. Protozoal motility was satisfactory.

There was satisfactory improvement in feed and water intake, ruminal movements, rumination, faecal output and abdominal distension in all the animals of both groups within 4-6 days of treatment.

When results of both the groups were compared, it showed that pH and buffering capacity of rumen fluid of animals of group A were significantly lower than that of group B. However, the chloride concentration of rumen fluid of group A was higher than that of group B. Plasma concentration of chloride and potassium were significantly lower in group A as compared to group B, preoperatively as well as postoperatively.

The observations of remaining one animal were quite different and this animal was not included in any of two groups. Its findings have been described separately. An extrareticular abscess was also found in this case. Swab from this abscess revealed mixed infection of *Klebsiella sp* and nonlactose fermenter gram negative rods. There was no improvement in feed and water intake, faecal output, ruminal movements even after seven days of surgery and this animal was discharged on owner's request.

From persual of observations of the present study, the following conclusions are drawn:

1. Most of the buffaloes suffering from traumatic reticuloperitonitis have electrolyte imbalance.
2. Two times intravenous fluid therapy with five liters of 2.7% saline solution supplemented with 5.0g of potassium chloride satisfactorily improves the electrolyte imbalance.