Surgical Management of Ruminal Impaction due to Non-Penetrating Foreign body Syndrome in Kankrej Cattle
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Abstract
Eight Kankrej cattle of both sexes ageing from 3 - 10 years were presented with history of complete anorexia and wasting body condition. Clinical examination revealed suspended ruminal motility, emaciation, animal passes scanty faeces and palpation of left paralumbar fossa fill hard impacted mass. On the basis of history and clinical examination tentatively diagnosed as cases of ruminal impaction and confirmative diagnoses were carried out by the exploratory rumenotomy. Impacted masses (15-37 kg Polythene bags) were taken out from the rumen. Five cases of ruminal impaction due to plastic foreign body in cattle showed uneventful recovery and restoration of normal appetite after surgical intervention within one month and rest three cases died after few days of operation.

Keys word: ruminal impaction, non-penetrating foreign body, plastic, Kankrej cattle.

Introduction
Surgical affections of the ruminant fore stomach due to ingested foreign bodies are the subject of attention almost all over the world and of major economic importance due to severe loss of production and production ability. Now a days problem of non-penetrating foreign body syndrome is increasing at alarming pace in urban areas where the animals are let loose for free grazing. It is characterized by accumulation of plastic, rexin, polythene bags, ropes and non penetrating metal objects like nuts, bolts etc. in the rumen and reticulum of bovine1.

Material and Method
Eight Kankrej cattle of both sexes (6 Cow and 2 Bull) ageing from 3 - 10 years were presented to Veterinary Hospital, Shree Jaliyan Gauseva Trust, Deesa (Gujarat) provided through mobile ambulatory service from urban area during the period of 2008-10. All the animals were presented with history of complete anorexia, wasting body condition since long time and were let loose for free grazing in the city area during the entire day hours routinely. Clinical examination revealed suspended ruminal motility, emaciation, animal passes scanty faeces and palpation of left paralumbar fossa fill hard impacted mass. Temperature, heart rate and respiration rate were within the normal range. On the basis of history and clinical examination tentatively diagnosed as cases of ruminal impaction and confirmative diagnoses were carried out by the exploratory rumenotomy.

Result and discussion
Rumenotomy was performed under paravertebral nerve block using 2 % lignocaine
hydrochloride\textsuperscript{1} and impacted masses (15-37 kg Polythene bags) (Fig.1) were taken out from the rumen. Inside the rumen huge entangled, tightly fixed plastic bags and other materials accumulated and due to churning movement causing ruminal impaction (Fig.2), hence the difficulties were found to remove complete plastic foreign body. After complete evacuation of these foreign bodies additions of rumen cud was carried out. Post-operatively ample amount of fluid therapy along with antibiotic\textsuperscript{2}, analgesic\textsuperscript{3} and antihistaminic\textsuperscript{4} were administered for five days in prescribed doses. Two boli of prebiotic\textsuperscript{5} were administered orally twice a day for five days to revive the normal fermentation process in the rumen. The animal started taking feed from 3 - 7\textsuperscript{th} postoperative day and gradually increase in appetite was observed. Sutures were removed on 12\textsuperscript{th} postoperative day.

Fig. 1 Non-penetrating foreign body (polythene bags) from cattle

Five cases of ruminal impaction due to plastic foreign body in cattle showed uneventful recovery and restoration of normal appetite after surgical intervention within one month and rest three cases died after few days of operation.

Rumen impaction is a condition which results from the accumulation of the indigestible materials in the rumen which interferes with the flow of ingesta leading to distension of the rumen and passing of scanty or no faeces.\textsuperscript{2} It was characterized by pale mucous membrane, complete cessation of rumination, impacted rumen, atony, reduced rumen motility and inappetance.\textsuperscript{3, 4} Similar clinical observations were reported in present studies. Primary rumen impaction occurs in cattle mostly with depraved appetite most of this animal eat plastics, ropes or lather pieces, which make tight balls inside the rumen due to churning movement.\textsuperscript{5} Rumenotomy along with transplantation of fresh ruminal cud were produced excellent recovery and found to be best technique of restoration of normal ruminal function at

\textsuperscript{1} Lignocaine hydrochloride: Inj. Xylocaine, Astra Zeneca Pharma India Ltd., Bangalore
\textsuperscript{2} Ceftriaxone: Inj. Intacef: Intas pharmaceuticals Ltd., Ahmedabad.
\textsuperscript{3} Meloxicam: Inj. MeloneX: Intas pharmaceuticals Ltd., Ahmedabad.
\textsuperscript{4} Pheneramine maleate: Inj. Avil, Intervet Pvt Ltd, Wagholi.
\textsuperscript{5} Ecotas bolus: Intas pharmaceuticals Ltd., Ahmedabad.
the field level for treatment of chronic ruminal impaction due to plastics in cattle and buffaloes.\textsuperscript{6} It was also reported mortality in cow due to mixed foreign bodies which included polythene bags, long canvas belts, military caps and bunch of thin nylon ropes. Same findings were observed in all cases. 10 kg and 37 kg of plastic foreign materials from the rumen and reticulum of cow were also evacuated.\textsuperscript{7} While 15 - 37 kg foreign bodies were evacuated in present studies. Gross examinations of the rumen with plastic were revealed areas of sloughing, hemorrhages, congestion and stunting of the ruminal papillae. Hence, it is recommended that grazing animals should be kept away from urban garbage and dumping places. Clean up of the environment would substantially reduce the prevalence of plastic foreign body in cattle. Surgery is the only effective method of treatment of plastic foreign bodies but an early diagnosis is essential for a favourable outcome.

![Image]

**Fig 2.** Entangled and tightly fixed plastic bags in rumen

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**References**


