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Therapeutic Management of Paralytic Ileus by Using Azithromycin as a Motility Modifier in a Cow

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Abstract

A primiparous Jersey crossbred cow was presented to large animal medicine unit with the history of anorexia and not voiding dung for past two days. Clinical examination normal vital sign parameters, doughy rumen, absence of rumination and rumen motility, rectal examination showed empty rectum. Auscultation of right paralumbar fossa evidenced irregular pink sound. Abdominocentesis was negative for peritonitis, radiography confirmed the absence of radio opaque foreign body. Ultrasonographic examination was done by using 3.5 to 5.0 MHz sector transducer, examined upper and lower quadrant of right paralumbar fossa, showed distended intestinal loops (4.86±0.84) with hypermotility with in the segment. Hematobiochemical examination showed normal haematological parameters, along with hypoproteinaemia (5.8 g/dL), hypoalbuminemia (1.9 g/dL) and hypokalaemia (2.1 mEq/L). Animal was treated with Azithromycin (1 mg/kg, IV) along with supportive therapy. Animal showed uneventful recovery in 3 days.

Keywords: Cow, Paralytic ileus, Treatment using Azithromycin

Paralytic ileus in cattle is one of the most important motility disorders, in which animal had delayed defecation, reduced bodily condition and reduced or absence of peristalsis (Tharwat, 2011). A variety of motility modifiers (Reddy *et al.,* 2018), purgatives (Sivaraman *et al.,* 2015), and prokinetic agents were used in the treatment protocol (Reddy *et al.loc cit*). In paralytic ileus, rectal examination fails to identify distended intestinal loops (Radostits *et al.,* 2007). In the present study animal was administered with azithromicin, as a prokinetic agent along with laxative therapy.

Case History and Observations

A primiparous Jersey crossbred cow presented to large animal medicine unit with the history of anorexia and not voiding dung for past two days. On clinical examination normal vital sign parameters, doughy rumen, absence of rumination and rumen motility was recorded. Rectal examination showed empty rectum(Fig.1). Auscultation of right paralumbar fossa showed irregular pink sound. Abdominocentesis was negative for peritonitis. Ultrasonographic examination was carried out by using 3.5 to 5.0 MHz sector transducer, where evidenced distended loops of intestine (5.56 cm) (Fig.2). Examined upper and lower quadrantof right paralumbar fossa, which showed distended intestinal loops (4.86±0.84) with hypermotility within the segment (Fig.3). Hematobiochemical examination showed normal haematological parameters, hypoproteinaemia (5.8 g/dL), hypoalbuminemia (2.3 g/dL), hypokalaemia (2.1 mEq/L) all other parameters were in normal limits.

Treatment and Discussion

The treatment initiated with fluid therapy, Inj - Ringer lactate @ 10ml/kg – IV, Inj- Azithromycin @1 mg/kg, IV along with normal saline and supportive therapy Inj -B1, B6 and B12 - 10 ml IM, for 3 days. On day 2, scanty mucous coated foul smelling pasty dung was observed, on day 3, the animal voided dung normally and

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Fig.1. Rectal examination revealed an empty rectum.

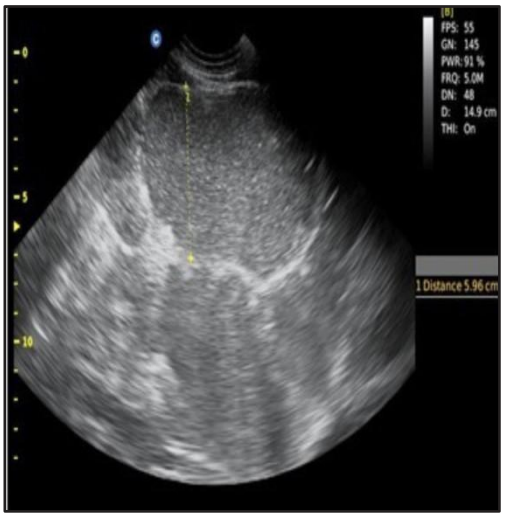

Fig.2.Transabdominal ultrasonographyof cross-section intestinal loops measuring 5.56 cm.

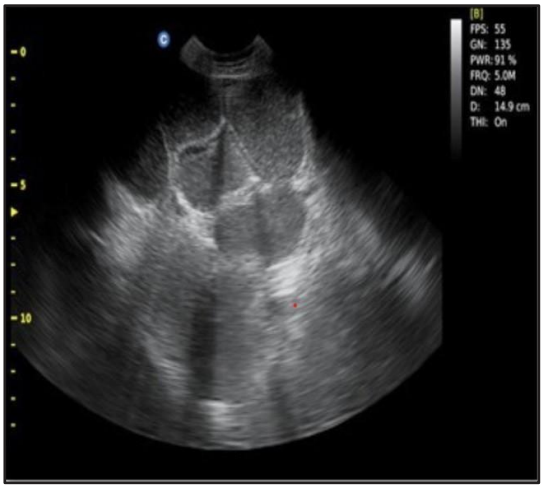

Fig.3.Transabdominalultrasonography showing loops of the intestines measuring (4.86±0.84 cm). Several loops of jejunum, seen in cross-section.

Fig.4. Dung passed after the azithromycin treatment.

recovered uneventfully (Fig.4). In the present study animal showed anorexia and achezia as prominent sign, (Tharwat 2011) also observed nonspecific signs such as anorexia, reduced peristalsis, and delayed defecation. In the present study ultrasonography was used a significant tool to identify intestinal distension (da Costa Dutra *et al.,*2020). Ultrasonography showed dilated intestinal segments in cattle with functional ileus, consistent with the findings of Khalphallah *et al.*(2016). Neostigmine can also be used as the motility modifier (Constable *et al.,*2012). The current study proved the use of Azithromycin, prokinetic drug as motility modifier, which is in accordance with the results of (Reddy *etal. loc cit.)*.

The results of the present study illustrate the effectiveness of ultrasonography in the diagnosis of paralytic ileus in cattle and Azithromycin was used for the motility modifier in the treatment of the case.

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