

Intussusception in a Goat Kid - A Case Report

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Intussusception is defined as the invagination of one segment of the bowel into the lumen of the adjacent distal portion of the bowel and is referred to as the intussusceptum, the segment of bowel into which it is invaginated is termed intussuscipien (Smith, 1985). Intussusception is common at jejunoileal and ileocaecocolic junctions and is rarely seen in the colonic or jejunojejunal segment. The absence of defecation for more than one day is abnormal and leads to a fatal syndrome of bowel obstruction (Radostits *et al.*, 2007). Potential causes of intestinal obstruction are mechanical obstruction due to intussusceptions, volvulus, feed boluses, blood clots, or hairballs (Radostits *et al.*, 2007). In cattle and buffaloes, there are many causes of obstruction of the small intestine such as intussusceptions and volvulus (Pravettoni *et al.*, 2009). Telescoping of the intestinal part occurs mostly in the jejunum and cecum in dogs and cattle. Along with the portion of the intestine, its mesentery also is dragged along and there is compression of the thin-walled vein resulting in acute passive hyperemia. Macroscopically, the affected part is dark red or bluish and swollen. Usually, gangrene and peritonitis supervene terminating in death. In some stray cases, the invaginated portion may be sloughed off, healing occurring by granulation tissue. Epithelium covers the scar, but at the site of the scar circulatory stenosis may form (Sastri and Ram Rao, 2001). This paper presents a case of ileocaecal junction intussusception in a goat kid that was identified during post-mortem as a cause of death.

CASE HISTORY AND OBSERVATIONS

A Tellicherry kid aged 4 months weighing 13.5 kg was reported to be dull, depressed, anorectic, continuously bleating with abdominal pain & distention, reluctant to move, and presence of scanty mucoïd faces with slightly congested conjunctiva. This ailing kid was treated with analgesic, anti-allergic and anti-bacterial drugs for two days, but suddenly died even after continuous monitoring and care.

A detailed necropsy was conducted on the carcass, which revealed the telescoping of ileum (4 cm) into the cecum, *i.e.* ileocaecal junction intussusceptions (Fig. 1-4). Samples were collected and subjected to necessary laboratory investigation procedures to confirm the etiological agent.

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DISCUSSION

In the present kid necropsy revealed the telescoping of ileum (4 cm) into the cecum. This might be due to hyper-motility of the intestine that arose out of diarrhea and other linear foreign body action (continuous irritation, caused by intestinal worms) (Subramaniyan *et al.*, 2016). Scanty or no literature was available in this regard in kids. The etiology of intussusception is referable to several disorders of intestinal motility. Essential predisposing factors are strong peristalsis in one bowl segment and distention of the segment immediately distal to it, submucosal abscesses, fibro-serous granulation (Okamoto *et al.*, 2007), intestinal tumors such as mucosal papilloma or adenocarcinoma (Archer *et al.*, 1988), and enteritis resulting in vigorous and uncoordinated intestinal motility or hyper-motility and gas distention (Pearson, 1971).

Intussusception is a severe obstructive intestinal condition in which the intestinal lumen may be open and ingesta may pass through initially (Anderson and Ewoldt, 2005). Intussusception in buffalo calves was reported following exposure to infectious agents causing diarrhea and peristalsis disorders (Constable *et al.*, 1997). The incidence of intussusceptions in cattle is relatively low ranging from 0.5-15% of all obstructive gastrointestinal disorders (Smith, 1980; Fubini, 1986). In contrast to this, Naylor and Bailey



Fig. 1: Kid, Intussusception



Fig. 2: Intussusception, Ileocaecal junction



Fig. 3: Hyperemic Ileocaecal junction



Fig. 4: Intussusceptum & Intussusciens

(1987) reported no cases of intrusions in 51 calves at less than 2 months of age showing signs of abdominal distension. The proposed pathogenesis of intussusceptions involves hyper-peristaltic activity in the proximal segment of the bowel concurrent with the relaxation of the distal segment, including parasitism, dietary changes, and viral or bacterial enteritis (Smith, 1980; Afonso and Costa, 2007; Desrochers and Anderson 2016; Mann *et al.*, 2019) in different livestock species. They also incriminated presence of mural lesions, intraluminal masses, foreign bodies, or simply the knotting of intestinal circular muscle as predisposing causes. In a study by Smith (1980) 83% of bovine cases of intussusceptions diagnosed at necropsy involved calves less than one year old, the majority being less than one month old. Although there are many studies reported by several authors on other domesticated and wild animals, there were no such cases reported in small ruminants and this might be the first of this kind that we are reporting. This might be because of challenges to diagnose, especially in small ruminants at the farm (Braun, 2005).

As listed and suggested by several authors' the causes of intussusception may be of different origins and natures. It is essential to have a customized, detailed management protocol on deworming, the proportion of dietary fiber

in the daily ration, and immediate medical attention with advanced diagnostic equipment to identify intussusceptions early and plan the treatment protocol/intervention as per the condition.

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SECOND ANNOUNCEMENT

XI ANNUAL CONVENTION AND NATIONAL CONFERENCE OF SVSBT-2024

XI Annual Convention of the Society for Veterinary Science & Biotechnology (SVSBT) **and National Conference on "Biotechnological Innovations to Augment Health and Productivity of Livestock and Poultry for Sustainable Livelihood"** will be **organized** by College of Veterinary Science, Proddatur-516 360, YSR District, Andhra Pradesh, under Sri Vekateswara Veterinary University (SVVU), Tirupati, **during 23rd to 25th October, 2024**. The detailed Brochure cum First Announcement showing Theme Areas/Sessions, Registration Fee, Bank Details for online payment and deadlines, etc. has been floated on the Whatsapp group and e-mails of all life members. The organizing committee **invites abstracts** of original and quality research work on theme areas of seminar limited to 250-300 words for oral and poster sessions by **e-mail on or before 10th October, 2024 to: svsb2024@gmail.com OR rajakishorekonka9@gmail.com** for inclusion in the Souvenir cum Compendium to be published on the occasion.

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