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CASE STUDY **OPEN ACCESS**

Recto-cervico-vaginal prolapse in non-descript postpartum buffalo and its clinical management

Rajesh Kumar[1], Dinesh Kumar Yadav[2], Vipin Kumar Yadav[3], S. Jaisawal[4], S. Srivastava[5], and Sachin Gautam[6]
Department of Veterinary Gynecology and Obstetrics, C.V.Sc.& A.H., NDUAT,
Kumarganj, Faizabad, UP. 224229.
1. Assistant Professor, Deptt. of Veterinary Gynaecology and Obstetrics, NDUAT,Kumarganj, Faizabad, UP. 224229.
2. M.V.Sc. Scholar, Deptt. of Veterinary Medicine
3. M.V.Sc. Scholar, Deptt. of Veterinary Surgery and Radiology
4. Associate Professor & Head, Deptt. of Teaching Veterinary Clinical Complex
5. Associate Professor & Head, Deptt. of Veterinary Gynaecology and Obstetrics
6. Assistant Professor, Deptt. of Animal Nutrition

ABSTRACT
A four year old nondescript postpartum buffalo presented at TVCC, C.V.Sc. &A.H, NDUAT, Kumarganj, Faizabad with history of parturition 20 days back. An elongated, cylindrical mass protrude through the anal orifice and protrusion of cervix and vagina from vulva. Thus, the case is diagnosed as recto-cervico-vaginal prolapse. In order to abolish straining epidural anesthesia given (Lignocaine hydrochloride 2%, 10 ml) in sacro-coccygeal space . The prolapsus was washed with potassium permagnate solution(1:1000) (Khurma et al., 2016), along with removal of all debris and dead tissues; and replaced their respective anatomical locations. Purse string suture was applied on anal orifice and horizontal mattress suture were taken at the vulvar lips to overcome further protrusion. Inj Oxytocin 20IU(slow intravenous), inj.mifex 450 ml (slow intravenous), inj. Melonex 20 ml, im; inj. Chlorpheniramine maleate 10ml im, inj. Ceftriaxone 3 g, im given. Except inj. Oxytocin and Mifex all medications were continued for five days. The suture were removed after five days. The buffalo had an uneventful recovery, and no further recurrence was reported.
Keywords: buffalo, recto-cervical-vaginal prolapsed, epidural anesthesia, management and pelvic organ prolapsed (POP).

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INTRODUCTION

Prolapse of rectum may occasionally occur in any animal in dystocia due to persistent violent straining and a relaxed anal sphincter. Slight eversion of rectum at parturition is common, but severe prolapse is rare [19], in cattle, it may be associated with the coccidiosis, rabies, or vaginal or uterine prolapse [2]. Rectal prolapse may be classified as incomplete, in which only the rectal mucosa is everted, or complete, in which all rectal layers are protruded [2]. An elongated, cylindrical mass protrude through the anal orifice is usually diagnostic [2]. Prolapse of genital organ is common reproductive problem which adversely affect production and reproduction performance of animal [1]. Cervico-vaginal prolapse seen all species but most commonly in cattle [19] and involve protrusion of varying parts of the vaginal wall and the cervix through the vulva. The prolapse begin as an intussusception-like folding of the vaginal floor just cranial to the vestibulovaginal junction, discomfort caused by this eversion, coupled with irritation and swelling of the exposed mucosa, results in straining and more extensive prolapse; eventually the entire vagina may be prolapsed, with the cervix conspicuous at the most caudal part of the prolapsus. It is interesting to note that the common denominator in virtually every instance of vaginal prolapse is incompetence of the constrictor vestibule and constrictor vulvae muscles [3]. Walker [23] has classified vaginal prolapse as first, second third and fourth degree on the basis of progression, severity and prognosis. In second degree prolapse, the floor of vagina is in continuous prolapse, if neglected, the

bladder may be reverted into the prolapsus, kinking the urethra and interfering with urination; as a result bladder fills and enlarged which may interfere with replacement of prolapsed vagina unless bladder is first drained. Usually bladder is drained by elevating the prolapsus to allow straightening of the urethra; occasionally, needle (14-gauge or smaller) puncture through the vaginal wall. The recto-cervico-vaginal prolapse is a rare disorder [1] and the prognosis is more grave [19].

In large animals, caudal epidural anesthesia is suggested to reduce straining, facilitate repositioning the prolapsed rectum and permit surgical manipulations reduction and reposition with a purse string suture is recommended. The suture should be loose enough to leave slightly more than one finger opening into rectum. In addition to reduction, reposition and retention, submucosal resection followed by reposition and retention, or amputation of rectum can be applied as per condition of the case [24]. Many techniques available for repair of cervico- vaginal prolapse, one have advantage over the others for the specific prolapse presented; however there is no perfect procedure [18]. Regardless of which procedure is utilized for retention of the vagina (+- cervix and bladder) proper restraint is important. For retention of cervico-vaginal prolapse Buhner technique, prolapsed pins, Minchev procedure and Winkler cervicopexy may be utilized [18].

CASE HISTORY AND CLINICAL OBSERVATION

A four year old nondescript postpartum buffalo presented at TVCC, CVSc &A.H, NDUAT , Kumarganj, Faizabad with history of parturition 20 days back. The owner state that parturition is normal but after parturition small ball like mass was seen at vulva and animal strain continuously and prolapsed mass is gradually increase in size the animal was treated by quack but not responded instead rectal prolapse also ensue. Since last 12 hours the buffalo was not defecate and urinate.

At first instance the animal was found healthy and alert but visual inspection reveals that an elongated, cylindrical mass protruded through the anal orifice and protrusion of cervix and vagina from vulva. Thus, the case is diagnosed as recto-cervico-vaginal prolapse.

MODUS OPERANDI OF CLINICAL MANAGEMENT

On palpation, the consistency of protruded mass through vulva is suggestive that bladder might be involve. On elevating the prolapsus with both hand, the urine flows and when flow of urine ceased, the vaginal wall also punctured with needle, again urine starts draining until bladder empetied. In order to abolish straining epidural anesthesia given (Lignocaine hydro chloride 2%, 10 ml) in sacro-coccygeal space [12]. The prolapsus was washed with potassium permagnate solution(1:1000) [12], along with removal of all debris and dead tissues. After application of liquid paraffin, the prolapsed rectal mass was replaced manually at their anatomical site and purse string suture was applied. The prolapsed cervico-vaginal mass were lubricated with liquid paraffin [1] and the prolapsus replaced at their anatomical site. Moreover, the operator kept his arm remain inserted into vagina, at the same time 20 IU oxytocin was given. Approximately after ten minutes the operator withdraw his arm; and horizontal mattres suture were taken at the vulvar lips to overcome further protrusion. After completion of procedure, injection Mifex (450 ml by slow intravenous), inj. Melonex 20 ml, im; inj. Chlorpheniramine maleate 10ml im, inj. Ceftriaxone 3 g, im given. All medications were continued for five days except inj. Mifex and oxytocin. The suture were removed after five days.

RESULT AND DISCUSSION

The buffalo had an uneventful recovery, and no further recurrence was reported.

The patient was kept on easily digestible green fodder. Careful digital removal of faeces from rectum was also tried. Rectal prolapse may result from prolonged tenesmus or increased intra-abdominal pressure due to bloat, proctitis, diarrhorea, act of parturition and constipation [21]. Moreover, Cynthia M. Kahn and Scott Line [2] reported that rectal prolapse in cattle, may be associated with the coccidiosis, rabies, or vaginal or uterine prolapsed. There was history of chronic straining due to cervico-vaginal prolapse in present case.

Lignocaine hydrochloride 2% epidural was used by Singh and Jain [22] however similar anesthesia was used in present study. The rectal prolapsed routinely managed by its reposition and application of a purse string suture [8, 13]. Amputation is indicated when reposition is not possible due to severe swelling or adhesions or when necrosis of the mucosal layers or perforating injuries are present [11]. Number of techniques are available for management of rectal prolapsed viz. submucosal re section [9], rectal ring method, stair stepamputation [6, 24], delorme's operation [5] and popular transabdominal procedures namely Ivalon® sponge [15], Marlex® mesh [10], Ripstein [17, 18], perineal surgical repair [16], prophylactic colcopexy [20] and extended abdominal rectopexy [14]. Submucosal resection [9] is the preferred technique if the prolapsed mucosa is necrotic, ulcerated, or traumatized. In present case

calcium borogluconate was given order to increase muscle tonicity along with ceftriaxone to prevent secondary bacterial infection. The recto-cervico-vaginal prolapse is always an extremely serious condition in any farm animal. A prolapsus is highly prone to mechanical injury and/ or trauma and environmental contamination, and this may lead to increased maternal morbidity and even to the death of the animal owing to trauma, laceration, subsequent hemorrhage, tissue necrosis, bacterial contamination, some time urinary incontinence, hypocalcaemia, stress incontinence and shock [7]. Therefore, the case of pelvic organ prolapsed (POP) requires early attention, prompt and efficient management and proper treatment to overcome further serious complications in reproductive performance of the animal in the future.

Fig.1 Prolapse of vagina, cervix and, because of persistent straining, the rectum

Fig .2 Elevation of Prolapsus to empety the bladder

Fig.3 Needle puncture through vaginal wall to drain the urine from bladder

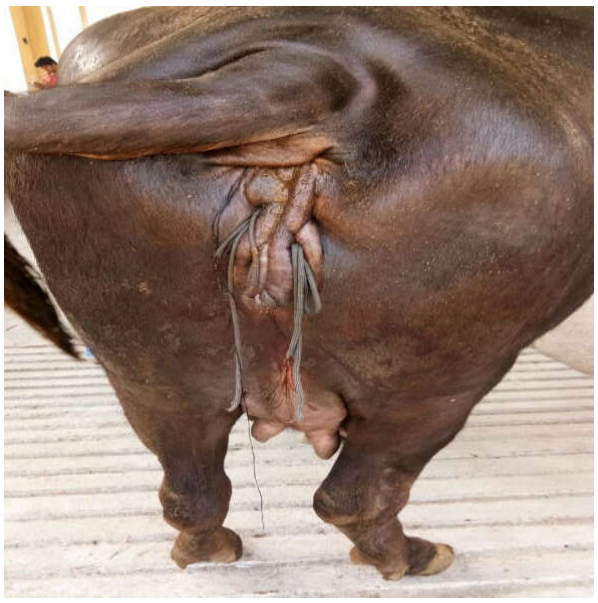

Fig.4 Purse string suture in Anal Orifice and Horizontal mattress on vulvar lips.

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