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Management of dystocia in a Pomeranian: A case report

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Abstract

Dystocia, the inability of a dam to expel the fetus without manual assistance, is a significant reproductive challenge in canines, with varying causes, including maternal factors and fetal factors. Pomeranians have been reported to have the highest incidence of reproductive disorders. Medical management of dystocia often involves the use of ecbolic agents like oxytocin and calcium, along with physical manipulation. However, these treatments are contraindicated in cases of obstructive dystocia due to the risk of increased fetal loss and traditionally C-section is the last hope. This case report describes the successful management of dystocia due to improper cervical dilation in a 5-year-old Pomeranian, which had mated with a Golden Retriever, resulting in a full-term pregnancy. The animal was presented with abdominal distention, unproductive straining and utero-verdin discharge, indicative of dystocia. After confirming the diagnosis of improper cervical dilation, treatment was initiated with intravenous fluids, calcium gluconate and multivitamins. Valethamate Bromide was administered intravenously to induce cervical dilation, followed by oxytocin to facilitate uterine contractions and fetal expulsion. The procedure resulted in the delivery of three live and one dead fetus within 45 minutes. Immediate neonatal care was provided to the live puppies. This case underscores the importance of timely intervention in dystocia cases to improve fetal viability and avoid the need for a Caesarean section and its associated complications. Proper management can significantly enhance outcomes for both the mother and the fetuses.

Keywords: Dystocia, golden retriever, pomeranian, valethamate bromide

Introduction

Dystocia, a common and serious reproductive complication in canines, refers to the failure of the dam to expel the fetus naturally through the birth canal, requiring manual or surgical intervention. This condition can stem from either maternal or fetal factors, with research indicating that maternal causes account for 24.7% of cases, while fetal factors are responsible for 75.3% (Darvelid and Linde-Forsberg, 1994) [1]. The term dystocia covers a wide range of issues that can arise during parturition, including uterine inertia, fetal malposition and abnormalities in the birth canal, among others. Among various breeds, the Pomeranian has been reported to have the highest incidence of reproductive disorders, with a significant rate of 29.83% (Dhurvey *et al*., 2022) [2]. This predisposition highlights the importance of breed-specific considerations in managing dystocia.

In the management of dystocia in female dogs and queens, medical intervention typically involves the administration of ecbolic agents such as oxytocin and calcium. These agents stimulate uterine contractions and help in the expulsion of the fetus. The use of oxytocin is particularly common; however, it must be administered with caution as it can increase the risk of fetal distress and loss, especially in cases where obstructive dystocia is present (Mota-Rojas *et al*., 2020) [3]. In cases of obstructive dystocia, where physical blockage prevents the fetus from passing through the birth canal, medical management should be avoided, as it could exacerbate the situation and lead to severe complications (Pretzer, 2008) [5].

The risks associated with the use of oxytocin are well-documented. Research by Münnich and Küchenmeister (2009) [4] indicates that oxytocin administration, while effective in stimulating labor, is associated with higher rates of puppy losses compared to other medications. This is particularly concerning in older primiparous female doges (those giving birth for the first time), especially those over six years of age. These older female doges are at a significantly higher risk of encountering special obstetric conditions, including dystocia and stillbirths, compared to their younger counterparts (Münnich and Küchenmeister, 2009) [4]. This finding underscores the need for careful

assessment and tailored management strategies in older female doges, who may require different approaches to mitigate these risks.

Case Presentation

A 5-year-old Pomeranian female dog was presented to Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, Mhow with history of abdominal distention, restlessness, utero-verdin discharge from vagina, swollen and hyperemic vulvar lips, panting and continuous unproductive straining to expel the fetus. Rectal temperature was recorded to be 99.8 ºF, pulse rate was 190 bpm and respiration rate was 74/min. Furthermore, it was brought to our notice that the female had mated with a 2 years old Golden Retriever leading to a full-term pregnancy. The female dog was off feed for 1 day, was showing nesting behavior and milk secretion from teats. Hematological and biochemical examination reports were within normal range. Based on patient history, per vaginal and clinical examination, it was confirmed to be a case of improper cervical dilation.

Treatment

Improper cervical dilation was diagnosed as the cause of dystocia. Upon diagnosis the animal was subjected to aggressive approach for treatment to relive dystocia and to promote whelping. Very first the female dog was stabilized with intravenous fluid DNS (250 ml) and multivitamins (Eldervit C- 2 ml). Initially to dilate the cervix Inj. Valethamate Bromide (10 mg) was administered intravenously and to initiate the uterine contraction inj. Calcium Gluconate (4 ml) was administered via slow intravenous route. Upon waiting for about 2 hours, inj. Oxytocin (10 Units) was administered intramuscularly over 30 minutes in divided dose along with cervical massage. As a result, one fetus was recovered within first 10 minutes of the procedure and rest all the fetus were recovered within 45 minutes. The female dog was also placed on an incline surface such that the vaginal opening faced downward to facilitate fetal expulsion. A total of three live and one dead fetus were recovered. All the live fetus were provided with immediate neonatal care.

Results and Discussion

With the successful medicinal approach 3 live and 1 dead fetus were delivered. The management of dystocia due to improper cervical dilation in a Pomeranian female dog mated with a Golden Retriever was successfully achieved through a combination of pharmacological and physical interventions. The administration of Valthamate bromide effectively facilitated cervical dilation, while oxytocin, delivered in divided doses, stimulated uterine contractions, leading to the successful delivery of three live fetuses and one dead fetus. Also, stabilization with intravenous fluids and calcium gluconate further supported animal during the procedure, highlighting the importance of comprehensive care in such cases.

Fig. 1: A pup with the Pomeranian female dog.

Fig. 2: A Pup post-partum.

Fig. 3: Puppies after birth

The successful outcome underscores the importance of timely and appropriate medical intervention in managing dystocia, particularly when dealing with cases of improper cervical dilation. This case also emphasizes the need for caution in using oxytocin, especially given its association with higher fetal losses, as noted in previous studies. The case illustrates that, with proper diagnosis and tailored treatment, it is possible to avoid surgical interventions like

Caesarean sections, reducing the potential for post-operative complications. This case adds to the body of evidence suggesting that a well-planned, conservative approach can be effective in managing dystocia in female doges, particularly in breeds predisposed to reproductive challenges like Pomeranians.

Dystocia is a common emergency in dogs and can be life-threatening for both mother and fetus. The most common cause of maternal dystocia in female dog is primary uterine inertia (Darvelid and Linde-Forsberg, 1994) [1]. Timely therapeutic intervention and delicate handling of such cases of emergency can not only extend the possibility of viability of fetus but also prevent Caesarian section and its post-operative complications.

References

1. Darvelid AW, Linde-Forsberg C. Dystocia in the female dog: a retrospective study of 182 cases. J Small Anim Pract. 1994;35(8):402-407.
2. Dhurvey M, Nema SP, Shivhare M, Gupta VK. Incidence of various reproductive disorders in different breeds of female dogs. Pharm Innov J. 2022;11(3):886-888.
3. Mota-Rojas D, Martínez-Burnes J, Napolitano F, Domínguez-Muñoz M, Guerrero-Legarreta I, Mora-Medina P, *et al*. Dystocia: factors affecting parturition in domestic animals. CABI Rev; c2020;1-16.
4. Münnich A, Küchenmeister U. Dystocia in numbers: evidence-based parameters for intervention in the dog: causes for dystocia and treatment recommendations. Reprod Domest Anim. 2009;44:141-147.
5. Pretzer SD. Medical management of canine and feline dystocia. Theriogenology. 2008;70:332-336.