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Diagnostic evaluation of inappropriate lactation syndrome (Precocious Udder) in a goat kid: A clinicopathological study

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Abstract

Precocious mammary gland development in prepubertal animals is an uncommon clinical finding in veterinary practice. This report describes a rare case of inappropriate lactation in a 10-day-old female goat kid presented with bilateral udder enlargement and milk secretion. Clinical examination revealed normal physiological parameters except for mild hyperthermia (104.7°F). Milk secretion was observed from both teats without any signs of mastitis. Based on history and clinical findings, the condition was diagnosed as precocious udder development. The animal was treated with prednisolone and supportive management was advised. The condition showed gradual regression. This case highlights the importance of recognizing endocrine-mediated abnormalities in neonatal animals and differentiating them from pathological conditions like mastitis.

Keywords: Precocious udder, goat kid, inappropriate lactation, endocrine disorder, neonatal mammary development

Introduction

Mammary gland development in goats is a hormonally regulated process primarily influenced by oestrogen, progesterone, prolactin, and growth hormone (Smith and Sherman, 2009) [5]. Normally, significant udder development occurs during late pregnancy or puberty (Radostits *et al.*, 2007) [3]. However, premature mammary development in neonatal or prepubertal animals is rare and is often referred to as precocious udder or inappropriate lactation syndrome.

Such conditions may arise due to endocrine imbalances (Singh *et al.*, 2020) [4], exposure to exogenous hormones, or ingestion of phytoestrogen-rich feed (Foster, 2016) [2]. Although reported sporadically in calves and goat kids, the exact pathophysiology remains unclear. Early recognition is essential to avoid unnecessary treatment and to differentiate it from mastitis or congenital abnormalities (Radostits *et al.*, 2007) [3].

Materials and Methods (Case Description)

A 10-day-old female Salem Black goat kid weighing approximately 5 kg was presented to the Veterinary Clinical Complex with a history of sudden udder enlargement (Fig 1,2 and 3) and milk secretion from the teats for the past 10 days.

Clinical Examination

- General appearance: Normal
- Behavior: Active
- Appetite: Satisfactory
- Urination and defecation: Normal
- Rectal temperature: 104.7°F

Local Examination

- Bilateral enlargement of the udder (Fig 3 &4)

- Non-painful swelling
- Milk secretion from both teats (Fig 5)
- No signs of inflammation (heat, redness, or pain)

Milk samples were collected for further examination.

Results

Clinical findings indicated:

- Normal systemic health status
- Absence of mastitis signs
- Presence of functional milk secretion in a neonatal animal

Based on the clinical presentation and absence of inflammatory signs, the condition was diagnosed as precocious udder development (inappropriate lactation syndrome). Ultrasonographic examination showed presence of dilated lacteals with anechoic milk content, confirming the presence of secretory activity within the gland (Foster, 2016) [2] (Fig 6).

Treatment

- Inj. Prednisolone @ 1 mg/kg IM
- Tab. Prednisolone 5 mg orally for 5 days

Supportive care and monitoring were advised.

Discussion

Precocious udder development in neonatal goat kids is an uncommon condition likely associated with endocrine disturbances. The presence of milk secretion suggests premature activation of the hypothalamic-pituitary-mammary axis, possibly due to elevated prolactin or estrogenic stimulation (Smith and Sherman, 2009) [5].

Similar cases have been attributed to:

- Maternal hormonal influence during gestation
- Phytoestrogen ingestion through feed
- Idiopathic endocrine dysregulation (Radostits *et al.*, 2007) [3]

The absence of inflammatory signs in this case ruled out mastitis, which is a critical differential diagnosis. Mastitis typically presents with pain, heat and altered milk consistency (Radostits *et al.*, 2007) [3]. Mild hyperthermia observed could be incidental or stress-related rather than directly associated with the condition.

Administration of corticosteroids such as prednisolone may help modulate hormonal imbalance and reduce mammary gland stimulation. Most reported cases show spontaneous regression (Divers and Peek, 2018) [1], indicating a favourable prognosis (Foster, 2016) [2].



Fig 1: Goat kid presented with abducted hindlimbs



Fig 2: Swollen udder noticed from rear view



Fig 3: Swollen mammary gland with milk discharge noticed



Fig 4: Goat kid prepared for ultrasonographic examination



Fig 5: Expression of mammary gland revealed milk content



Fig 6: Ultrasonographic examination showed dilated lacteals with anechoic milk content

Conclusion

This case highlights a rare instance of precocious udder development with milk secretion in a neonatal goat kid. Proper clinical evaluation is essential to differentiate it from mastitis and avoid unnecessary antimicrobial therapy. The condition generally carries a good prognosis with minimal intervention.

Acknowledgment

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Conflict of Interest

The authors declare no conflict of interest.

References

1. Divers TJ, Peek SF. Rebhun's diseases of dairy cattle. Elsevier; 2018.
2. Foster RA. Female reproductive system. In: Jubb KVF, Kennedy PC, Palmer N, editors. Pathology of domestic animals. Elsevier; 2016.
3. Radostits OM, Gay CC, Hinchcliff KW, Constable PD, *et al.* Veterinary medicine: a textbook of the diseases of cattle, sheep, pigs, goats and horses. Elsevier; 2007.
4. Singh K, Marnet PG, Sharma A. Hormonal regulation of mammary gland development and lactation in domestic animals. *Animal Reproduction Science*. 2020;220:106513.
5. Smith MC, Sherman DM. Goat medicine. Wiley-Blackwell; 2009.