



Case Report

First record narrow nostril of sheep in state of Kuwait

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ABSTRACT

Narrow nostril of sheep is rare in small animal. Kuwait has sheep of Awassi breed which has characteristic long head. The cases of narrow nostril in Awassi sheep were recorded in Kuwait city by the public authority for Agriculture Affairs and Fish Resources of Kuwait. The sheep owners claimed as nostril injuries of sheep later confirmed as narrow nostril. 25 cases were found during October 2017 to October 2019 in different farms belonging to Public authority for Agriculture Affairs and Fish Resources - Kuwait City, Kuwait. Clinically, all cases were suffered from persistent seromucous nasal discharge, deep breath, muzzle licking, dyspnea. Out of 25 cases only 5 (3 male and 2 female) were severely suffering from the respiratory distress. When they got any stress showed immediately tiredness, weak insemination, general weakness, extend the neck and head up and the last special show is the sound of whistling at the breathing. The affected sheep was subjected to surgically interference via total nostril expansion. All were successful with the disappearance of the symptoms as well as normal life with follow up.

INTRODUCTION

Respiratory affections occur frequently in sheep. In many countries respiratory diseases represent the most serious sheep problem and can be an important cause of death and reduced productivity (Martin, 1996). ENT (ear, nose, and throat) infection occurs more frequently in adult animals, with age between 2 and 4 years. Usually, clinical signs, such as sneezing, head shaking, anorexia, dyspnea, and nasal discharge are observed in animals with large masses obstructing the nasal cavity (De Las Heras et al. 1991). Respiratory diseases represent the most serious small ruminant problem worldwide and can be a significant reason of death and productivity reduction. Different surgical affections of the upper respiratory tract of sheep and goats were previously mentioned included nasal foreign bodies, sinusitis associated with the larvae of *Oestrus ovis*, retropharyngeal lymph node

abscessation, and benign or malignant nasal tumors (Jesse et al., 2019). The recorded small ruminant nasal tumors were adeno-papilloma (nasal polyps), adenomas, adenocarcinomas, lympho-sarcomas (goats), and squamous cell carcinomas (sheep) (Wilson, 2016, He et al., 2017 and Santana de Cecco et al., 2019). The first case of the disease was described by Cohrs in 1953 (Švara et al., 2006). Enzootic Nasal Adenocarcinoma (ENA) of sheep has been reported in many countries like Canada, Spain, France, Slovenia and China (McKinnon et al., 1982, Ortín et al., 2003, Švara et al., 2006 and Wang et al., 2016) and more recently in Turkey (Ozmen and Serpin, 2016), Algeria (Sid et al., 2018) and southern Brazil (Santana de Cecco et al., 2019). ENA diagnosis in small ruminants is mainly based on autopsy and histopathology, and recently, there are many literatures studied real-time PCR as an available method for ENT-2 detection (Walsh et al., 2014 and Apostolidi et al.,

2019). Clinically, the affected animals show persistent nasal discharge, dyspnoea, stertorous breathing, and productive cough; open mouthed breathing (Ozmen, and Serpin, 2016 and Sid et al., 2018). The lesion of ENA may be presented either unilateral or bilateral mass associated with facial enlargement, skull deformations and exophthalmia with deviation of the nasal septum in advanced unilateral tumors (Santana de Cecco et al., 2019) which can be confused with stenotic nares.

Narrow nostril or stenotic nares is part of the brachycephalic syndrome of short-nosed in that case the nostrils are pinched or narrow. This makes it more difficult to breathe and causes snorting and snoring in these animals. It is a congenital trait; these animals are born with it. Veterinarians perform a simple surgery to help widen the nares, often at the same time as a spay or neuter (Daniel core (2014).

MATERIAL AND METHODS

The study was conducted from October 2017 to October 2019 in different farms belonging to Public authority for agriculture affairs and fish resources - Kuwait City, Kuwait. A total number of 25 cases of Awassi sheep were found with narrow nostril of which five (3 male and 2 female) were severely suffering from seromucous nasal discharge, deep breath, muzzle licking, dyspnea, tiredness, weak insemination, general weakness, extend the neck and head up. There's a distinctive

sign the whistling sound of animals with narrow nostril. Surgical excision of the narrow nostril was performed and followed up for 6 months after operation.

Table 1: Description of cases

Case number	Species	Breed	Sex	Age
Case (1)	Sheep	Awassi	FEMAL	2 years
Case (2)	Sheep	Awassi	FEMAL	2 years
Case (3)	Sheep	Awassi	Male	3 years
Case (4)	Sheep	Awassi	Male	4 years
Case (5)	Sheep	Awassi	Male	5 years

Surgical techniques

Stenosis of the nares was evaluated visually prior to surgical procedure. As a precaution, 12 hours before the operation the animals were kept under observation with restriction of food and water. The operation was performed at standing position which facilitate to observe the location of incision and to have the wound equal in dimensions. All surgeries were carried out with the use of Xylazine hydrochloride @ 0.25/kg with local infiltration of a variable amount of 2% Lignocaine hydrochloride. The local anesthesia were given around nostril. Incision was made as cutting curve in the edges of nostril and sutured (interrupted suture) the incised are with silk number 1 or 2. The stitches were removed after 10 days. After post-surgery course antibiotic such as penicillin with oxytetracycline spray were recommended.

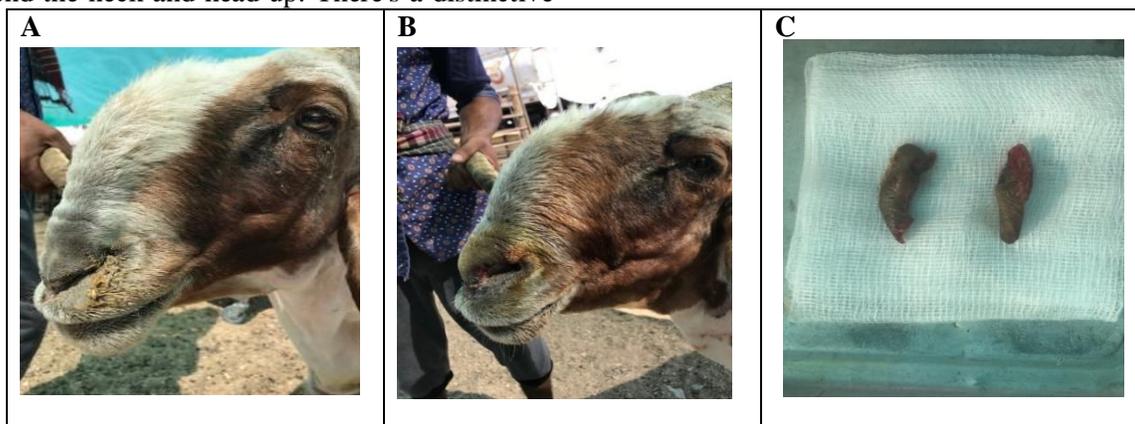


Figure 1: A. Narrow nostril (Before surgery); B. broaden of the nostril (After surgery); C. removed or cut part

RESULT AND DISCUSSION

Narrow nostril cases in sheep and its surgical intervention are the first work in Kuwait. All the cases of Awassi sheep were suffered from clinical symptoms such as seromucous nasal discharge, deep breath, muzzle licking, dyspnea, tiredness, weak insemination, general weakness, extend the neck and head up. The special show is the sound of whistling at the breathing. All animals underwent surgical intervention like figure 1.

Disappearance of the sound of whistling and the satisfaction of the animal by taking a normal breath without difficulty have been observed.

The head of Awassi sheep is long and narrow with a convex forehead profile. The external nose is composed of hairless epidermis and mobile underlying cartilage. The openings of the nose are known as the nares or nostrils. The cartilaginous nose consists of an unpaired cartilaginous septum and the paired dorsolateral, paired ventrolateral, and paired accessory cartilages. In adult, strongly horned rams, the convex line of the profile may be broken by a slight indentation between the forehead and the markedly curved nasal part of the head. However, the narrow nostril or stenosis nares is a congenital defect might associated with environmental affects.

CONCLUSION

The surgical technique was successfully used to correct narrow nostril in five sheep. The sheep were returned to their normal life and did not having any difficulties. This is first time in Kuwait.

COMPETING INTERESTS

The authors declare no competing interests.

AUTOER CONTRIBUTIONS

Khalifah Ali contributed to the collection of the data, clinical examination, and surgery. Haithem Farghali contributed to the conception and design of the work and writing of the manuscript and Ashraf Shamaa contributed to the conception, design of the work and revision of the manuscript.

REFERNCES

- De Las Heras, M., Garcia de Jalon, J.A., Sharp, J.M., 1991. Pathology of enzootic intranasal tumor in thirty-eight goats. *Veterinary Pathology*. 28, 474-481..
- Daniel core (2014). "Laser Bloodless Repair of Stenotic Nares". Aesculight. Retrieved 2017-02-06.
- Jesse FFA, Mubin HNA, Hambali IU, Mohd LMA, Chung ELT, Abba Y, Bitrus AA, Petter ID, Norsidin MJ (2019). Review on clinical management involving respiratory diseases in ruminants. *Adv. Anim. Vet. Sci.* 7(4): 321-325.
- Mckinnon AO, Thorsen J, Hayes MA & Misener CR (1982). Enzootic nasal adenocarcinoma of sheep in Canada. *The Canadian veterinary journal = La revue veterinaire canadienne*, 23(3), 88-94.
- Ozmen O and Serpin N (2016). First case of enzootic nasal adenocarcinoma (ENA) in a Sheep in Turkey. *MAE. Vet. Fak. Derg.* 1, 87-90
- Svara T, Gombac M, Vrecl M, et al. (2006). Enzootic nasal adenocarcinoma of sheep in Slovenia. *Journal of veterinary medicine. A, Physiology, pathology, clinical medicine* 2006;53(1):26-29.
- Sid N, Nour El Houda Belalmi, Louiza Benhamza, Soraya Ouhida, Mohammed Ezine Zebiri, Ahmet Aydoğan And Caroline Leroux (2018). First case report of enzootic nasal adenocarcinoma in "Ouled Djellal" ewe in Algeria. *Open Veterinary Journal*, (2018), Vol. 8(1): 9-12.
- Santana De Cecco, Bianca & Lorenzett, Marina & Henker, Luan & Weber, Matheus & Cristina, Ana & Moséna, Sbaraini & Baumbach, L & Canal, Cláudio & Driemeier, David & Petinatti Pavarini, Saulo & Sonne, Luciana (2019). Detection of enzootic nasal tumor virus (ENTV) in a sheep flock in southern Brazil. *Tropical Animal Health and Production*. 10.1007/s11250-019-01897-z.
- Wilson DW (2016). Tumors of the Respiratory Tract. In: Meuten, D.J. (ed), *Tumors in Domestic Animals*. John Wiley & Sons, Inc, Hoboken, NJ, USA.
- Wang, Bin & Ye, Ni & Shan, Tongling & Wen, Xintian & Huang, Yong & Yan, Qi-Gui (2016). Identification of novel and differentially expressed MicroRNAs in goat enzootic nasal adenocarcinoma. *BMC Genomics*. 17. 10.1186/s12864-016-3238-5.
- Walsh, S.R., Stinson, K.J., Menzies, P.T. And Wootton, S.K. (2014). Development of an ante-mortem diagnostic test for enzootic nasal tumor virus and detection of neutralizing antibodies in host serum. *Journal of General Virology*, 95, 1843-1854.