

## Post-partum Uterine Prolapse in Nicobari Sow- A Case Report

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### Abstract

A Nicobari sow was presented with complete uterine prolapse 12-14 hours post farrowing. The prolapsed uterine mass was exposed outside for a longer period as it is occurred during night hours and could be seen in the morning. Attempts were made to reposition the prolapsed uterine mass to its normal anatomical position, however, the sow died during the treatment period.

### Introduction

Uterine prolapse is one of the common complications in ruminant species especially in third stage of labour and less frequently occurred in porcine species. In pig, prolapse is generally partial which involves only one horn whereas in ruminant species, it is complete and involves eversion of the gravid cornua (Noakes *et al.*, 2009). Moreover, rectal and vaginal prolapse is also more common in pigs as compared to uterine prolapse (Supakorn *et al.*, 2017, Roberts, 1971). Hypocalcaemia (milk fever), hypoglycemia, prolonged dystocia, fetal oversize, fetal traction, excessive straining, uterine atony or uterine inertia, poor uterine tone, increased intra-abdominal pressure or hormonal imbalance due to excessive estrogen available in the feed or plants (phyto-estrogen) are the main etiological factors for uterine prolapse (Hanie, 2006, Jackson, 2004). Hormonal imbalance in the sense that increased concentration of estrogen and relaxin causes relaxation of pelvic ligaments and softening of cervical canal, which induce the uterine prolapse in pigs. It is considered a veterinary emergency as the affected pig usually dies within a short period of time without treatment. Present case report explains attempts to treat with repositioning of prolapsed uterine mass in the Nicobari sow, but could not be succeeded as sow died during the treatment period. However, the case has sent a message that the prolapsed uterine mass in pigs should be attended on urgent basis.

### Case history and observation

A Nicobari sow of 2 years age was attended for treatment of uterine prolapse. History revealed that the

farrowing was normal and nothing abnormal was noticed around farrowing. However, it was observed that sow was sitting in the water trough for in the morning. On inspection, it was observed that both the uterine horns were everted exposing the endometrium. Prolapsed uterine masses were oedematous and congested (Fig 1 and Fig 2). Body temperature, pulse and respiration rate were 102°F, 85 beats/minute and 17/minute, respectively.



Fig 1. Nicobari pig with uterine prolapse in standing position



Fig 2. Nicobari pig with uterine prolapse in lateral recumbency position

### Treatment

Prolapsed uterine mass was washed with normal saline and 1% KMnO<sub>4</sub> solution to remove to clean the

dirt. Attempts were made to reposition prolapsed uterine mass with difficulties. The sow was given 2000 mL of 5% DNS by intravenous route. Sow died in the course of treatment and management.

## Discussion

Uterine prolapse is occasionally observed in pigs up to several days after parturition or during farrowing. Excessive abdominal pressure or straining due to mal-position of fetus, fetal/maternal disproportion or inflammation in the birth canal or trauma with swelling are thought to be the main etiological factors to induce uterine prolapse in sow (Zimmerman *et al.*, 2012). Sows affected with uterine prolapse should be treated immediately as extensive prolapsed results into internal haemorrhage, shock and death (Noakes *et al.*, 2009). The uterus should be cleaned avoiding any damage and re-placed back into the genital opening and birth canal by gentle push. Proper repositioning of prolapsed uterus is most important to prevent any damage or injury or trauma (Gowda *et al.*, 2014) and each uterine horn should be inverted starting with its tip and gradually reduced until the uterine body has been reached in its original place (Zimmerman *et al.*, 2012). Stress and uterine damage will decide the survival and return to normal reproductive performance of sows (Blaes *et al.*, 2001). Complete and correct reposition of the prolapsed uterus and its restoration of tone will prevent its reoccurrence.

In multiparous pigs, repositioning and retention of the uterus is difficult by pushing, therefore it is better to keep the hind quarter well elevated (Arthur *et al.*, 2001). A successful retention of prolapsed mass is possible by pushing the uterine mass (Dewry *et al.*, 2017). The type, duration of the exposure, degree of damage and contamination with dirt and microorganism will decide the success of the treatment (Wachida and Kisani, 2011). Present study clearly sent a message that early and proper management of prolapsed uterus is necessary for restoration of the reproductive status of the pigs.

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## References

- Arthur, G.H., Noakes, D.E., Parkinson, T.J. & England, G.C.W. (2001). Veterinary Reproduction and obstetrics. 8<sup>th</sup> edn., W.B. Saunders Co. Ltd., London.
- Blaes, V. (2001). Uterine prolapse. JACBA summer. American cavy breeders association, Hastings.
- Dewry, R.K., Amarjit, K., Mahanta, N. & Kakoty, K. (2017). Management of post parturient uterine prolapse in a sow - a case report. North East Veterinarian. 17(1): 16-17.
- Gowda, K.H., Madhu, B.P. & Madhusudhan, H.S. (2014). Management of postpartum uterine eversion in a buffalo. Intas Polivet. 15(2): 428-429.
- Hanie, E.A. (2006). Prolapse of the Vaginal and Uterus: Text Book of Large Animal Clinical Procedures for Veterinary Technicians. Elsevier, Mosby.
- Jackson, P.G.G. (2004). Postparturient Problems in Large Animals. Hand Book of Veterinary Obstetrics. (2<sup>nd</sup> edn.). Elsevier Saunders.
- Noakes, D.E., Parkinson, T.J. & England, G.C.W. (2009). Veterinary reproduction and obstetrics. 9<sup>th</sup> edn. Saunders Elsevier the publication, Philadelphia.
- Roberts, S.J. (1971). Veterinary obstetrics and genital diseases. 2<sup>nd</sup> edn., CBS Publisher and Distributor, New Delhi.
- Supakorn, C., Stock, J.D., Hostetler, C. & Stalder, K.J. (2017). Prolapse incidence in swine breeding herds is a cause for concern. Open Journal of Veterinary Medicine 7: 85-97.
- Wachida, N. & Kisani, A.I. (2011). Uterine prolapse in a doe goat: A case report. International Journal of Animal and Veterinary Advances. 3(3): 135-137.
- Zimmerman, J.J., Karriker, L.A., Ramirez, A., Schwartz, K.J. & Stevenson, G.W. (2012). Diseases of swine. 10<sup>th</sup> edn. Blackwell Publishing, UK.