

Volume 7 Issue 6 June 2025

# Surgical Repair Of Traumatic Ventral Hernia In Large White Yorkshire Piglet - Case Report

# Yerukala Jayaramudu<sup>1\*</sup>, PL Sri Vyshnavi<sup>1</sup>, Praveenkumar Chandrasekaran<sup>1</sup>, Shivansh Mehra<sup>2</sup>, Bhanu Pratap Singh<sup>2</sup>, Krishna Kiran<sup>1</sup>, T Sai Kumar<sup>2</sup>, Mohammad Irfan<sup>3</sup> and Joga Kavya<sup>4</sup>

<sup>1</sup>MVSc Scholar, Division of Surgery, ICAR - Indian Veterinary Research Institute, Bareilly, Uttar Pradesh, India <sup>2</sup>PhD Scholar, Division of Surgery, ICAR - Indian Veterinary Research Institute, Bareilly, Uttar Pradesh, India <sup>3</sup>MVSc Scholar, Division of Veterinary Gynaecology and obstetrics, Acharya Narendra Dev University of Agriculture and Technology, Ayodhya, Uttar Pradesh, India <sup>4</sup>MVSc Scholar, Division of Veterinary Physiology and Climatology, ICAR - Indian Veterinary Research Institute, Bareilly, Uttar Pradesh, India **\*Corresponding Author:** Yerukala Jayaramudu, MVSc Scholar - Division of Surgery, ICAR - Indian Veterinary Research Institute, Bareilly, Uttar Pradesh, India.

DOI: 10.31080/ASVS.2025.07.0983

Received: April 28, 2025 Published: May 13, 2025 © All rights are reserved by Yerukala Jayaramudu., *et al.* 

#### Abstract

Ventral hernia results from the over stretching of abdominal muscles due to a sudden trauma that can results significant economic losses. A 3-month-old piglet was with the history of ventral abdominal swelling in the past 20 days. On clinical examination, all vital parameters were within the normal range. Upon palpation of the swelling, a definitive hernial ring was identified which confirms ventral hernia. Hernioplasty was performed under intravenous diazepam and ketamine anaesthesia. The defect was repaired using "vest-over-pants" overlapping suture technique, which provides reinforced muscular apposition and minimizes the risk of recurrence by enhancing the tensile strength of the abdominal wall. Postoperative recovery was uneventful, underscoring the efficacy of the vest-over-pants hernioplasty technique in the successful management of both congenital and acquired ventral hernias in piglets. **Keywords:** Ventral hernia; Large White Yorkshire Piglet; Vest Over Pants; Herniorrhaphy

# Introduction

Umbilical and scrotal hernias are among the most frequently observed anatomical defects in pig farms. These conditions generally occur at rates ranging from 1.7% to 6.7%, though under certain circumstances, their prevalence can unexpectedly rise or "spike" due to various factors [8]. A hernia occurs through any part of the abdominal wall except through the umbilicus or inguinal is a ventral hernia [3]. These are considered to be traumatic due to violent impact with blunt objects, separating the abdominal muscles [1]. Ventral hernias most commonly contain intestines, omentum, or both. Its most common occurrence is close to the last rib on the left side and in front of the inguinal region or at the vicinity of flank. The common etiology of ventral hernia is unknown. The frequency ranges from 0.4% to 1.2 % which varies with breed and sex [7]. The size of hernia depends on trauma caused. Reducible hernia in which the content can be completely and easily returned into the abdominal cavity [2].

Citation: Yerukala Jayaramudu, et al. "Surgical Repair Of Traumatic Ventral Hernia In Large White Yorkshire Piglet - Case Report". Acta Scientific Veterinary Sciences 7.6 (2025): 16-18.

Diagnosing a ventral hernia, by palpating a soft swelling on the abdomen other than the umbilical and inguinal region along with the hernial ring with a reducible mass. If the severity of the injury is more than it effects the healing process and increases the chances persistent hernia [6].

# **Materials and Methods**

#### **Case description**

A 3 months old female piglet was presented at Referral Veterinary Polyclinic in Izatnagar, with a noticeable swelling on ventral abdomen from the past 2 months. According to the owner, swelling is due to accidental compression by the dam's limb approximately 15 days after furrowing, following which the swelling began to increased progressively. Normal appetite and defecation throughout this period. Upon clinical examination, the piglet exhibited normal vital signs including temperature, heart rate, and respiratory rate within physiological ranges. Physical examination revealed a reducible swelling on the ventral abdomen, which could be gently manipulated back into place without eliciting pain. A novel technique vest over pants is effective in opposing hernial ring by maintaining equal tensions with minimal wound dehiscence, unlike other closure techniques [4]. Post-reduction, a palpable hernial ring was identified thus confirming the ventral hernia. Surgical repair of hernia was done aseptically by using diazepam at the dose rate of 0.5mg/kg b.wt. I/V and ketamine (at the dose rate of 5 mg/ kg b.wt I/M [5].

#### **Surgical Procedure**

The goal of surgery is to reduce the abdominal contents and close the external hernial ring so that herniation of abdominal contents cannot recur. First the animal pre anesthetized by Diazepam @2 mg/kg bwt intravenously and followed by induction with Ketamine @15 mg/kg bwt I/M [5]. The animal was positioned in dorsal recumbency. Surgical site was prepared by clipping hair and painted with povidone iodine. A linear incision was made over the mass and the skin was reflected. Also reflected the underlying tissues and the hernial ring was exposed. the hernial ring was scarified to promote healing and closed with vest over pants technique using synthetic absorbable suture material polyglactin 910(vicryl) No 1. The subcutaneous tissue was sutured with vicryl in a continuous suture pattern. Skin was sutured with cross mattress using synthetic non absorbable suture material polyamide No 1. sutured

area was dressed with povidone iodine. antibiotic (streptopencillin,20000 U/Kg) and analgesic (meloxicam 0.2 mg/kg) administered intramuscularly daily for 5 days. Sutures were removed on  $12^{\text{th}}$  post operatively.



Figure 1: Swelling at the ventral abdominal region.



Figure 2: Showing hernial ring and hernial contents.



Figure 3: Closure of abdomen and skin.

Citation: Yerukala Jayaramudu, et al. "Surgical Repair Of Traumatic Ventral Hernia In Large White Yorkshire Piglet - Case Report". Acta Scientific Veterinary Sciences 7.6 (2025): 16-18.

17



Figure 4: Complete healing on 10th day post-operation.

## Acknowledgements

Authors are thanking full to the Head, RVP - TVCC, ICAR - IVRI and Head, Division of Surgery for providing necessary facilities.

## **Conflict of Interest**

Not available

### **Bibliography**

- 1. Amare E and Haben F. "Hernias in farm animals and its management technique-a review". *International Journal of Clinical and Medical Case Reports* 4 (2020): 4001.
- Babalola SA and George SI. "Surgical management if ruptured umbilical hernia in a piglet". *Nigerian Veterinary Journal* 38.1 (2017): 1-3.
- Fesseha H and F Kidanemariam. "Ventro-Lateral Abdominal Hernia in Sheep and its Surgical Correction Techniques - A Case Report". Open Access Journal of Biomedical Science 2 (2020): 285-288.
- 4. Kitessa JD., *et al.* "A case report on ventrolateral herniorrhaphy in sheep: The novel way of using vest-over-pants closure technique". *Veterinary Medicine and Science* 7 (2021): 2303.
- Konwar B and Saikia B. "Ketamine and its combination with diazepam for balanced anaesthesia in swine". *Indian Veterinary Journal* 83 (2006): 507-508.

- Sahoo S., *et al.* "Development of a critical-sized ventral hernia model in the pig". *Journal of Surgical Research* 210 (2017): 115-123.
- 7. Searcy-Bernal R., *et al.* "Effects of and factors associated with umbilical hernias in a swine herd". *Journal of the American Veterinary Medical Association* 204 (1994): 1660-1666.
- 8. Thailer G., *et al.* "Maximum likelihood analysis of rare binary traits under different modes of inheritance". *Genetics* 143 (1996): 1819-1829.