



ISSN: 2456-2912

VET 2024; 9(2): 515-517

© 2024 VET

www.veterinarypaper.com

Received: 08-12-2023

Accepted: 22-01-2024

KD Patel

PG Scholar, Department of Surgery,
College of Veterinary Science and
Animal Husbandry, Kamdhenu
University, Anand, Gujarat, India

BM Patel

PG Scholar, Department of Surgery,
College of Veterinary Science and
Animal Husbandry, Kamdhenu
University, Anand, Gujarat, India

JK Mahla

Assistant Professor, Department of
Surgery, College of Veterinary Science
and Animal Husbandry, Kamdhenu
University, Anand, Gujarat, India

RM Patel

PG Scholar, Department of
Gynaecology, College of Veterinary
Science and Animal Husbandry,
Kamdhenu University, Anand, Gujarat,
India

KM Patel

PG Scholar, Department of Medicine,
College of Veterinary Science and
Animal Husbandry, Kamdhenu
University, Anand, Gujarat, Gujarat,
India

CN Patel

PG Scholar, Department of
Gynaecology, College of Veterinary
Science and Animal Husbandry,
Kamdhenu University, Anand, Gujarat,
Gujarat, India

DB Chaudhari

Assistant Professor, Department of
Surgery, College of Veterinary Science
and Animal Husbandry, Kamdhenu
University, Anand, Gujarat, India

MT Chaudhari

Assistant Professor, Department of
Surgery, College of Veterinary Science
and Animal Husbandry, Kamdhenu
University, Anand, Gujarat, India

HD Patel

PG Scholar, Department of Medicine,
College of Veterinary Science and
Animal Husbandry, Kamdhenu
University, Anand, Gujarat, India

Corresponding Author:

KD Patel

PG Scholar, Department of Surgery,
College of Veterinary Science and
Animal Husbandry, Kamdhenu
University, Anand, Gujarat, India

Surgical management of inter digital fibroma in Cattle

KD Patel, BM Patel, JK Mahla, RM Patel, KM Patel, CN Patel, DB Chaudhari, MT Chaudhari and HD Patel

DOI: <https://doi.org/10.22271/veterinary.2024.v9.i2h.1250>

Abstract

Inter digital hyperplasia (IDF) is a benign fibroma and commonly reported in draft animals; however two cases of IDF reported in the milk animals. HFx cow had bilateral forelimb inter digital fibroma, whereas Gir cow had unilateral fibroma in right forelimb with broken medial hoof wall with growth. Surgical removal of fibroma was carried out under xylazine sedation and local infiltration anaesthesia, bleeding was prevented by using thermo cauterization to prevent recurrence as well as to destroy roots of benign fibroma in both animals. Gir cow had additional growth in claw with broken hoof wall and double sole. Corrective hoof trimming with surgical removal of growth was carried out and wooden block was applied in healthy claw to shift weight bearing from affected claw. Antiseptic dressing followed by bandage was applied at surgical site till recovery. Inter digital fibroma had better recovery rate at early stage, but lateral spread of fibroma followed by rubbing, scratching and subsequent hoof injuries leads secondary complications like abnormal growth which had limited success as open hoof claw had frequent insults and creates complication of healed wound.

Keywords: Inter digital fibroma, double sole, fibroma

Introduction

Inter digital hyperplasia (IH) or fibroma was benign, painless and overgrowth of hardier fibrous connective tissue usually covered by skin epithelium between the digits [1]. Inter digital fibroma was observed more in the farm animals; which predispose animals to lameness. Lameness cause more economic loss to farmers in terms of reduced milk production [2], increased duration of inter calving interval [3], increase culling rate [4] and cost associated with foot bath and treatment. Predisposing factors of laminitis involves herd level housing environment, management practices, nutrition, parity, stage of lactation, body weight and genetics [5], whereas hereditary predisposition in some animals [6]. A genetic predisposition was the main cause hypothesized for IH [7]. It managed by surgical excision of wart like growth. Various post operative complications also occurs like maggot at the site of growth removal, continues bleeding are major complications.

Case History: Two cows were presented with inter digital fibroma/ hyperplasia in forelimb; where Gir cow had unilateral, whereas HFx had bilateral forelimb interdigital fibroma (Fig.1). Both cases had growth between the digits along with lameness & foul smell. Feed and water intake was normal in both animals, but bleeding was present in right fore foot.



Fig 1: Unilateral IDF with digital growth



Fig 2: Bilateral IDF in HFx

Clinical signs

Clinical observation reveals the hard, lemon size growth between the digits and also has the double sole condition in both the fore foot which leads to lameness. In right fore limb between the digit also has maggot infestation and also foul smell was there. All physiological parameters were normal. Animal was alert and active. normal feed and water intake.

Diagnosis

On the basis of history and clinical sign final diagnosis was Interdigital fibroma in right fore foot in Gir and in HFx in both fore limb interdigital fibroma. Corrective hoof trimming was carried out in Gir cow and found double sole (Fig.4) with dirt filled inside, whereas medial hoof wall was ruptured in inner structure also converted to hyperplasia after frequent injuries.

Surgical management

Animals were sedated with intravenous injection of 0.04mg/kg. After sedative effect both animals were restrained in left lateral recumbency for surgical removal of fibroma. Surgical site was prepared by hair clipping and application of surgical scrub and providence iodine antiseptic solution. Local anaesthesia was achieved by 2% lignocaine hydrochloride infiltrated around the fibrous growth (Ring block). The fibroma was excised from the base with the help of BP blade and thermo cauterization was applied to stop bleeding from surgical site as well as to destroy the roots of fibroma. Post operatively a paste of zinc oxide powder and glycerin was applied on surgical wound followed by pressure bandage applied regularly till recovery.



Fig 3: Broken hoof wall with growth



Fig 4: Double sole



Fig 5: Wooden block applied

A Gir cow had double sole along with inter digital fibroma, hence following surgical correction, healthy claw was trimmed to apply wooden block. Adhesive material was applied to claw and wooden block (Fig.5) and after fixing temporary bandage was applied on claw for better adhesion. Medicinal management was carried out with Inj. Dicrysticinesulphate @ 15000-25000 IU IM and Inj Meloxicam@0.3mg/kg b.wt IM. Along with regular anti septic dressing with ointment zinc oxide and glycerin and surgical wound was covered with bandage till recovery.

Results

Both animals showed uneventful recovery of inter digital fibroma within 12 days, but Gir cow had right claw hoof wall tear with growth (Fig. 3) and double sole (Fig.4) issue was tried to manage by providing rest by placing wooden block support in healthy claw to shift weight from affected to normal claw. Hoof claw growth was showed recurrence and managed by chemical cauterization but failed to recovery completely as damaged hoof wall needs extra time to cover the wound.



Fig 6: Before and after treatment case no. 1



Fig 7: Before and after treatment in case no.2

Conclusion

Inter digital fibroma had better recovery rate at early stage, but lateral spread of fibroma followed by rubbing, scratching and subsequent hoof injuries leads secondary complications like abnormal growth which had limited success as open hoof claw had frequent insults and creates complication of healed wound.

References

1. Shukla SP, Garg UK, Pandey A, Dwivedi DP. Interdigital fibroma. Buffalo, 2017, 36(3).
2. Amory JR, Barker ZE, Wright JL, Mason SA, Blowey RW, Green LE. Association between sole ulcer, white

- line disease and digital dermatitis and the milk yield of 1824 dairy cows on 30 dairy cow farms in England and Wales from February 2003-November 2006. *Prev. Vet. Med.* 2008;83:381-391.
3. Garbarino EJ, Hernandez JA, Shearer JK, Risco CA, Thatcher WW. Effect of lameness on ovarian activity in postpartum Holstein cows. *J Dairy Sci.* 2004;87:4123-4131.
 4. Booth CJ, Warnick LD, Grohn YT, Maizon DO, Guard CL, Janssen D. Effect of lameness on culling of dairy cows. *J Dairy Sci.* 2004;87:4115-4122.
 5. Vermunt JJ, Greenough PR. Predisposing factors of laminitis in cattle. *Br. Vet. J.* 1994;150:151-164.
 6. Chhatpar KD, Panchal AM, Kamani DR. Interdigital fibroma and its surgical management in a bullock. *IntasPolivet.* 2012;13(2):213-214.
 7. Götze R. Praktische Hinweise zur Erkennung der Erbgesundheit und Erbfruchtbarkeit aus dem Erscheinungsbild des Zuchtbullen. *Tierärztl Umsch.* 1952;7:466-474.