**CASE REPORT** 

# Femoral artery dissection and ileum perforation caused by a camel bite: A case report

Hussein Sheleh, Nawras Abduljawad, Rama Moustafa, Asim Nayeem, Hamid Chatha, Thiagarajan Jaiganesh

## ABSTRACT

Introduction: Camel bites constitute a relatively rare type of animal bite-related injuries, which tend to occur mainly in some regions of the developing world. Although they often leave trivial bite marks on the surface, they can be associated with a serious damage to tissues and a high rate of infection. Case Report: A 60-year-old male presented to our emergency department few hours after being bitten by a camel in the right lower abdomen. His chief complaint was severe abdominal pain. He was found on examination to have decreased pulses in the right lower limb. A computed tomography scan of the abdomen with intravenous contrast revealed a filling defect in the right common femoral artery and free air in the peritoneum. The vascular and general surgeons on-call were consulted and the patient was shifted to the operation room, where exploration of the right groin showed dissection of the common femoral artery and clots in the superficial femoral & profunda femoris arteries. This was followed by an exploratory laparotomy that identified

Hussein Sheleh<sup>1</sup>, Nawras Abduljawad<sup>1</sup>, Rama Moustafa<sup>1</sup>, Asim Nayeem<sup>2</sup>, Hamid Chatha<sup>2</sup>, Thiagarajan Jaiganesh<sup>3</sup>

<u>Affiliations:</u> <sup>1</sup>MD,Resident physicians, Department of Emergency Medicine, Tawam hospital, Al-Ain, Abu Dhabi, UAE; <sup>2</sup>MRCS, FRCEM,Consultant physicians, Department of Emergency Medicine, Tawam hospital, Al-Ain, Abu Dhabi, UAE; <sup>3</sup>MS, DNB, DCH, FRCS, FRCEM, PGCHCL,Chairman of the Department of Emergency Medicine, Tawam hospital, Al-Ain, Abu Dhabi, UAE.

<u>Corresponding Author:</u> Hussein Sheleh, Al-Ain, Abu Dhabi, P.O. Box:15258, UAE ; Email: hussein.sheleh@hotmail.com

Received: 12 December 2018 Accepted: 26 December 2018 Published: 2 February 2019 a perforation of the ileum. Both injuries were repaired successfully and the patient was discharged seven days later in a good condition. Conclusion: When approaching a patient with this type of bites, it's paramount to remember that small puncture wounds on the skin could be lying on top of a life-threatening detriment.

Keywords: Camel bite, Femoral artery dissection, Ileum perforation

How to cite this article

Sheleh H, Abduljawad N, Moustafa R, Nayeem A, Chatha H, Jaiganesh T. Femoral artery dissection and ileum perforation caused by a camel bite: A case report. Case Rep Int 2019;8:100057Z06HS2019.

Article ID: 100057Z06HS2019

\*\*\*\*\*\*\*

doi:10.5348/100057Z06HS2019CR

# **INTRODUCTION**

While animal bites are common injuries that make a major contribution to morbidity and mortality in the world, camel bites are relatively rare and only few about them can be found in the Western medical literature [1]. These injuries tend to occur in certain regions of the developing world like India, Arabia and Northern Africa, mostly during the camels' breeding season [2].

Although they usually leave trivial bite marks on the skin, camel bites can be associated with significant damage to vital organs and structures [3, 4]. They are generally characterized by a complex mechanism of injury that involves penetrating, crushing, and blunt trauma components. Moreover, they have a high infection rate

# Case Rep Int 2019;8:100057Z06HS2019. *www.casereportsinternational.com*

with different pathogenic bacteria, and have the potential to transmit rabies [1, 4].

To the best of our knowledge, this is the first case report of a femoral artery dissection caused by a camel bite, which was further complicated by the presence of small bowels perforation.

# **CASE REPORT**

A 60-year-old male, who works as a camel caregiver, presented to our emergency department (ED) complaining of generalized abdominal pain following a provoked camel bite to the right lower abdomen approximately three hours prior to his presentation. The patient reported that the camel picked him up by the lower abdomen, and threw him away onto the ground. He denied any head injury. He denied any significant past medical or surgical history.

On examination, he was alert and oriented to time, place and person. His vitals upon arrival were as follows: Temperature 37 °C, blood pressure 87/65 (which raised to 107/64 few minutes after starting a resuscitation with intravenous (IV) fluids), respiratory rate 22, heart rate 114, and saturation of peripheral oxygen 100% on room air. Examination of the abdomen revealed superficial bite marks with minimal bleeding over the lower abdomen, groin & lower back on the right side of the body. There was also a right lower abdominal wall hematoma. Palpation of the abdomen revealed diffuse tenderness and abdominal wall rigidity. The pelvis was clinically stable. The distal pulses on the right lower limb were not palpable and the right foot was cold.

Trauma panel of blood was sent, and the notable finding was a significant leukocytosis 25.8 10<sup>9</sup>/L (predominant neutrophilia). An Extended Focused Assessment with Sonography for Trauma (E-FAST) scan was performed, but it didn't reveal any gross free fluid within the peritoneal or pleural cavity. The patient was sent for a computed tomography (CT) scan of the thorax, abdomen and pelvis with IV contrast, which identified the presence of pneumoperitoneum (Figure 1) with minimal free fluid raising suspicion of hollow viscus perforation. Soft tissue emphysema was also noted over the right lower abdominal wall and right groin. A segment of the right common femoral artery (CFA) wasn't visualized and the flow distal to it was noted to be diminished (Figure 2). This was concerning for an underlying arterial injury.

The patient was resuscitated initially in the ED with an IV bolus of normal saline. He also received four units of packed red blood cells and two units of fresh frozen plasma for ongoing resuscitation. IV Antibiotics (Augmentin and Ceftriaxone), IV Analgesics, intramuscular (IM) Tetanus Toxoid and IM Tetanus Immunoglobulin were also administered in the ED.

The teams of vascular & general surgery took the patient to the operation theatre. Groin exploration was performed first by the vascular surgeon, who reported finding a bruised right CFA with absent pulses in the right superficial femoral artery (SFA) and right profunda femoris artery (PFA). Longitudinal arteriotomy revealed a proximal CFA circumferential intimal disruption in addition to intraluminal clots in the SFA & PFA. The CFA was repaired with a great saphenous vein interposition vein graft, while the SFA & PFA were retrieved with #4 Fogarty balloon. Following that, the general surgeon performed an exploratory laparotomy in order to identify and repair the perforated ileum. He also repaired an associated mesenteric injury.

After the operation, the patient was admitted under the care of the general and vascular surgery teams. He completed a course of IV Piperacillin-Tazobactam during his stay and had uneventful improvement in his clinical condition. Seven days later, he was discharged in a good condition with a prescription of oral analgesics only and appointments for follow-up in the clinics.



Figure 1: Computed tomography scan of the abdomen with intravenous contrast demonstrating free air in the peritoneal cavity (indicated by the squares).



Figure 2: Computed tomography scan of the abdomen with intravenous contrast demonstrating complete occlusion of the right common femoral artery (the arrow indicates the site of occlusion).

# DISCUSSION

Camels have long been domesticated in some regions of the world for their meat, milk, and textile products. Generally, they are viewed as passive & docile animals. However, sexually active male camels can occasionally

# **EDORIUM** Journals

# Case Rep Int 2019;8:100057Z06HS2019. *www.casereportsinternational.com*

become aggressive, especially during the rutting season (from November to March), and attack humans even without provocation. The incidence of camel bites is not well known; however, it was estimated previously in a single study in our city "the city of Al-Ain in UAE" that 1.5 per 100,000 inhabitants per year sustained a camel bite injury that required hospitalization [2].

These bites tend to have a complex mechanism that involves penetrative, crushing, and blunt trauma components. As a result, they can be quite challenging to manage [1, 2]. Our patient, for example, wasn't simply bitten by a camel, but he was also gripped by its jaws, lift in the air, and thrown onto the ground. Another feature of these bites is that they can cause serious damage to deep tissues with only minor puncture wounds on the skin. This is due to the long peg-like canine teeth, which can reach up to 4 cm, and the strong jaws of these animals [2, 5, 6].

The majority of these bites involve the upper limbs with the brachial artery being the most frequently injured artery [7, 8]. While there has been one report only of ileum perforation [4], we haven't found any report of femoral artery dissection secondary to a camel bite.

Camel bites have a high rate of bacterial infections that can reach up to 86 % [9]. Therefore, proper cleaning, wound irrigation, and debridement of unviable tissue is important. Primary closure of these wounds is generally not recommended, and prophylactic antibiotics should always be considered. Fluoroquinolones (such as Ciprofloxacin or Ofloxacin) could be a good choice of treatment [10]. However, in this case the patient was managed initially in the ED with IV Augmentin and IV Ceftriaxone, followed by a course of IV Piperacillin-Tazobactam later on in the floor.

Camels can also transmit rabies, so rabies postexposure prophylaxis may also be considered, especially if it is not possible to directly monitor the behavior of the offending camel [1]. In this case, the patient didn't require prophylaxis against rabies, because the attack was provoked and the camel was available for direct monitoring in the farm where the patient worked. Moreover, rabies is not endemic in our region.

# CONCLUSION

Camel bites are tricky in that they cause small puncture wounds on the surface and deep destruction in the depth. They also carry a high risk of bacterial infection and have the potential to transmit rabies.

# REFERENCES

1. Calleo VJ, Curtin PO, Biondich AS. Camel bites: A case study with a summary of current epidemiology, injury patterns, and treatment modalities. Wilderness Environ Med 2018;29(3):380–2.

- Abu-Zidan FM, Eid HO, Hefny AF, Bashir MO, Branicki
  F. Camel bite injuries in United Arab Emirates: A
  6-year prospective study. Injury 2012;43(9):1617–20.
- 3. Abu-Zidan FM. Crossroad between camel bites and crocodile bites. Afr Health Sci 2015;15(2):i–iv.
- 4. Rahman S, Abdel-Kader S, Idris K, Abu-Zidan FM. An unusual, life-threatening camel bite to the abdomen of a young man. Surgery 2017;162(2):466–7.
- 5. Abu-Zidan FM, Abdel-Kader S, El Husseini R. Common carotid artery injury caused by a camel bite: Case report and systematic review of the literature. Ulus Travma Acil Cerrahi Derg 2014;20(1):59–62.
- Kain R, Arya S. Camel bite: An uncommon mode of maxillofacial injury, its mechanism and fatality: Case series and review of literature. Natl J Maxillofac Surg 2015;6(2):172–5.
- 7. Sharma D, Devgarha S, Mathur RM. Camel bites A unique experience. Occup Med Health Aff 2015;3:192.
- Saxena PS, Sharma SM, Singh M, Saxena M. Camel bites injuries. J Indian Med Assoc 1982;79(5–6):65– 8.
- 9. Suess O, Magerkurth O, Da Silva C, Brock M, Pietilä TA. Camel bite: An unusual type of head injury in an infant. J Pediatr Surg 2004;39(10):e11–3.
- Eilbert WP. Mammalian bites. In: Walls R, Hockberger R, Gausche-Hill M, editors. Rosen's Emergency Medicine: Concepts and Clinical Practice. 9ed. Philadelphia, PA: Elsevier; 2018. p. 690–7.

#### \*\*\*\*\*\*

### **Author Contributions**

Hussein Sheleh – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Nawras Abduljawad – Substantial contributions to conception and design, Analysis and interpretation of data, Drafting the article, Final approval of the version to be published

Rama Moustafa – Acquisition of data, Drafting the article, Final approval of the version to be published

Asim Nayeem – Substantial contributions to conception and design, Revising it critically for important intellectual content, Final approval of the version to be published

Hamid Chatha – Acquisition of data, Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

Thiagarajan Jaiganesh – Substantial contributions to conception and design, Analysis and interpretation of data, Revising it critically for important intellectual content, Final approval of the version to be published

## **Guarantor of Submission**

The corresponding author is the guarantor of submission.

#### Source of Support

None.

# **EDORIUM** Journals

Case Rep Int 2019;8:100057Z06HS2019. *www.casereportsinternational.com* 

## **Consent Statement**

Written informed consent was obtained from the patient for publication of this case report.

# **Conflict of Interest**

Authors declare no conflict of interest.

# **Data Availability**

All relevant data are within the paper and its Supporting Information files.

## Copyright

© 2019 Hussein Sheleh et al. This article is distributed under the terms of Creative Commons Attribution License which permits unrestricted use, distribution and reproduction in any medium provided the original author(s) and original publisher are properly credited. Please see the copyright policy on the journal website for more information.











Submit your manuscripts at

www.edoriumjournals.com







EDORIUM JOURNAL OF





JOURNAL OF CASE REPORTS AND IMAGES IN PATHOLOGY







PSYCHIATRY

EDORIUM JOURNAL OF

ANESTHESIA

JOURNAL OF CASE REPORTS AND IMAGES IN ORTHOPEDICS AND RHEUMATOLOGY







EDORIUM JOURNAL OF

INTERNATIONAL JOURNAL OF CASE REPORTS AND IMAGES





VIDEO JOURNAL OF BIOMEDICAL SCIENCE





INTERNATIONAL JOURNAL OF BLOOD TRANSFUSION AND IMMUNOHEMATOLOGY



