

Equine Diseases and Welfare in Jordan: A Retrospective Study (1261 cases)

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ABSTRACT

This study explores equine health problems and welfare issues encountered in Jordan. The medical records of equine patients presented to the humane center for animal welfare over 3 years were reviewed. A total of 1261 equine cases met the criteria were included in the study. There were 1173 (93%) horses, 74(5.9%) donkeys and 12 (1%) mules. Most cases were presented for problems related to musculoskeletal (30.2%), integumentary (20.7%), and alimentary (19.6%) system. There were 876 (69.5%) inpatients and 349 (27.7%) outpatient cases. The duration of staying at the hospital ranged from 1 to 141 days according to the severity of the case. There were 29 cases treated surgically and 1232 cases treated medically. Most cases were discharged while 37 (2.9%) cases were humanely euthanized and 84 (6.7%) cases died. This study reports some overrepresented health problems and reflects equine welfare status in Jordan.

Keywords: welfare, equine, diseases, horses, mules, donkeys, working equids, Jordan.

INTRODUCTION

Horses, donkeys, and mules participate in many essential aspects of human life throughout different parts of the world, particularly in the third world countries. Those animals are usually used for transport, work, and sport (racing, jumping), pleasure riding, and breeding. Animal abuse and neglect are not uncommon in developing countries. Therefore, a legislation to prevent cruelty and brutal treating against those animals is warranted and mandatory (Stuff, 1996).

There are around 94 million horses, donkeys and mules in developing countries (FAOSTAT, 2006) which

nearly comprise 80% of the world equine population, therefore animal welfare for those animals is crucially important. (Pritchard *et al.*, 2005; Wilson, 2002). *et al.*, The majority of equines in the developing countries are used for transporting goods, people, tourism, and ceremonies, by carts, packs or ridding (Blackeway, 1994; Pritchard *et al.*, 2005; Dinka *et al.*, 2006). Despite their importance in these countries, the welfare and husbandry of working equines are poor.

Neglect, abuse, and lack of veterinary care of these animals predispose them to multiple diseases and problems. Consequently, a wide spectrum of welfare issues are encountered, including poor body condition, respiratory diseases, limb disorders, eye abnormalities, high parasite burdens, dental problems and gastrointestinal illness (Saul *et al.*, 1997; de Aluja, 1998; Curran *et al.*, 2005; Pritchard *et al.*, 2005; Tesfaye and Curran, 2005). Donkeys and mules are thought to be tougher than horses and tend to be owned by poor people; therefore they are overworked, and have lower

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Received on 8/5/2013 and Accepted for Publication on 26/9/2013.

quality life (de Aluja, 1998).

The aim of this study is to explore different diseases and to assess major potential welfare problems of horses, donkeys, and mules in Jordan.

Materials and Methods

Criteria for selection of cases:

This retrospective study was conducted, using medical records of the humane center for animal welfare (HCAW) between January 2007 and December 2009.

Methods of analysis

The medical records of equine patients over 3 years were reviewed. Date of presentation, residence of the animal, species, age, sex, use, presenting complaint(s), diagnosis, treatment, in or outpatient status, duration of stay, and the outcome of each treatment were recorded for each animal.

Areas of residence of animals were grouped according to the governorate of residence. The use of the enrolled animals was divided into work, jumpers, race, pleasure, and breeding. Presenting complaints and diagnoses were grouped according to the system affected. Systems involved were assigned to respiratory, alimentary, integumentary, musculoskeletal, nervous, visual and others (miscellaneous). Presenting complaint and diagnosis were further grouped within each system to find out the major disorders of each system. Both surgical and medical treatments were recorded. Medical treatment was divided into different categories according to the medications administered. Animals were considered in the outpatient category if they were admitted and discharged at the same day. The duration of stay for animals in the inpatient category was also recorded. The outcome of the enrolled cases was grouped into three categories; discharged, humanely euthanized, or died.

Statistical analysis:

Data were analyzed using descriptive statistics of the

Statistical Package for Social Sciences (SPSS) program version 15.0 (SPSS Inc, Chicago, IL, USA).

Results:

Of the total number of equine cases presented to the humane center for animal welfare (HCAW) in the period under review, a total number of 1261 equine cases met the criteria and were included in the study. There were 679 (53.1%) cases presented in 2007, 324 (25.7%) in 2008, and 267 (21.2%) cases in 2009. The distribution of the month of presentation for cases over the year is illustrated in Figure 1. Geographical distribution and the governorate of residence for enrolled animals are illustrated in Figure 2. Animal species data were available for 1259 cases. There were 1173 (93%) horses, 74 (5.9%) donkeys and 12 (1%) mules. Gender data was available for 1217 cases. There were 608 (48.2%) males and 609 (48.3%) females. Age data were available for 1011 animals. Of those the age ranged from 1 day to 25 years old (mean= 4.7 years, SD= 3.82). The use of most cases was not recorded (n=999, 79.2%). The majority of equine cases presented were used for work (n=198, 15.7%), followed by race (n=42 3.3%), pleasure (n=16, 1.3%), jumping (n=5, 0.4%), and breeding (n=1, 0.1%).

Presenting complaint was available for 1183 cases (Figure 3). There were 381 (32.2%) cases presented for musculoskeletal system problems; of those lameness was the main presenting complaint (n=280) (73.5%). The rest were summarized in Figure 4. There were 262 (22 %) cases presented with integumentary system problems; of those skin wounds was the main presenting complaint (n= 214) (81.7%). The rest were summarized in Figure 5. Two hundred forty eight cases (21%) were presented with complaints related to the alimentary system; of those colic was the main presenting complaint (n= 192, 77.4%). Other presenting complaints related to the alimentary system were summarized in Figure 6. Cases presented with respiratory, nervous, and system

problems were 81(7%), and 26 (2.2%), respectively. Affections related to the eye were 47 (4%) from the examined cases. Presenting complaints related to the respiratory system were summarized in Figure 7. There were 138 (11.6%) cases presented with miscellaneous complaints.

There were 876 (69.5%) inpatients and 349 (27.7%) outpatient cases. Data related to animal stay was not available for 37 (2.9%) cases. The duration of stay was available for 1206 cases; it ranges from 1 to 141 days (mean = 5.9; SD = 9.7).

There were 29 surgically and 1232 medically treated cases. The outcome was not available for 109 (8.6%) cases. Most cases were discharged (n=1030, 81.7%). Thirty seven cases were humanely euthanized and 84 (6.7%) cases died.

Discussion:

This study discloses the wide range of equine diseases and reflects potential welfare issues encountered in Jordan. Some of these diseases are reported in higher proportions than those in other geographical areas. This raises an important issue and reflects the welfare status in Jordan.

During the three years of the study, the number of cases has decreased dramatically (close to 50% in 2008 and 60% in 2009). This is likely due to the increase in the awareness among equine owners enhanced by the HCAW and other organizations that have been working on this issue in the last years. Equine cases were brought to the center from different geographical parts of Jordan, and the highest numbers were presented from those areas that are close to the center; although, it appears that owners from long driving distances brought their sick animals and this is likely because the service is free of charge and of descent quality. Most cases were presented in the summer months because equine owners

use their animals more in this period of the year for tourism, agricultural and pleasure purposes.

Most equine cases were presented for complaints related to the musculoskeletal system and this is likely due to many reasons related to the management, animal misuse and poor housing. Lameness was the main musculoskeletal complaint. This problem usually catches the owner's attention because it hinders the animal use significantly. Half of the equine cases presented with complaints related to the musculoskeletal system were in fact suffering from laminitis. This proportion is extremely high and has many reasons. As grain overload, lack of hoof care, and improper shoeing are the main reasons for the increased number of laminitis cases.

Skin wounds appear to be the major complaints of cases that were presented for a skin disease. There are different reasons for this finding, most of which are related to animal housing, abuse and misuse as well as the use of improper equipment (saddle, bridle, etc..) and.

Colic was the major condition of the cases presented for problems related to the digestive system. It is the authors' observation that most equine colic cases in Jordan are due to impaction, grain overload and obstructive foreign bodies (ropes and plastic objects). Except for a short period of local grass, most equines are fed long stem straw, chopped straw, oats, and bran. This feed regime makes these animals susceptible to impaction colic and grain overload. In addition, hunger and improper housing predispose these animals to foreign body ingestion resulting in penetrating or obstructive causes of colic. Most of equine owners that use their animal for work are of limited income and this further complicates the issue. De-worming, vaccination, and teeth rasping are not routinely done because of the relatively high cost and decreased awareness. This goes side by side with the fact that the second highest recorded diagnosis for digestive tract was oral and teeth diseases.

Tetanus, strangles, and equine herpes virus infection

(neurologic form) are important recorded diseases in Jordan that could be controlled by routine vaccination. However tetanus and strangles vaccines are not available in the veterinary market in Jordan.

This study provides basic information and data that reflect the equine welfare status in Jordan. Welfare situation should be assessed and reevaluated routinely in

Jordan as well as the different part of the world. In addition, this study raises important issues about equine welfare status due to potential common problems in society awareness and nutritional, health and housing management. Further studies are warranted to shed light on main specific reasons for this situation and suggesting ways to rectify it.

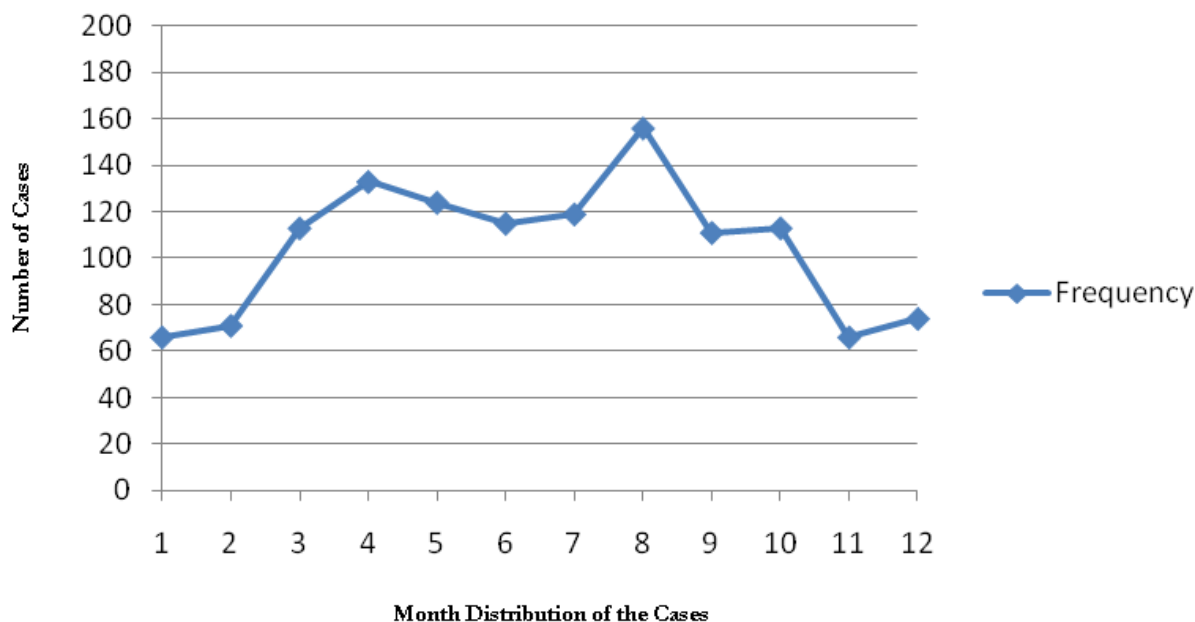


Figure 1: A monthly distribution of the cases that have been examined

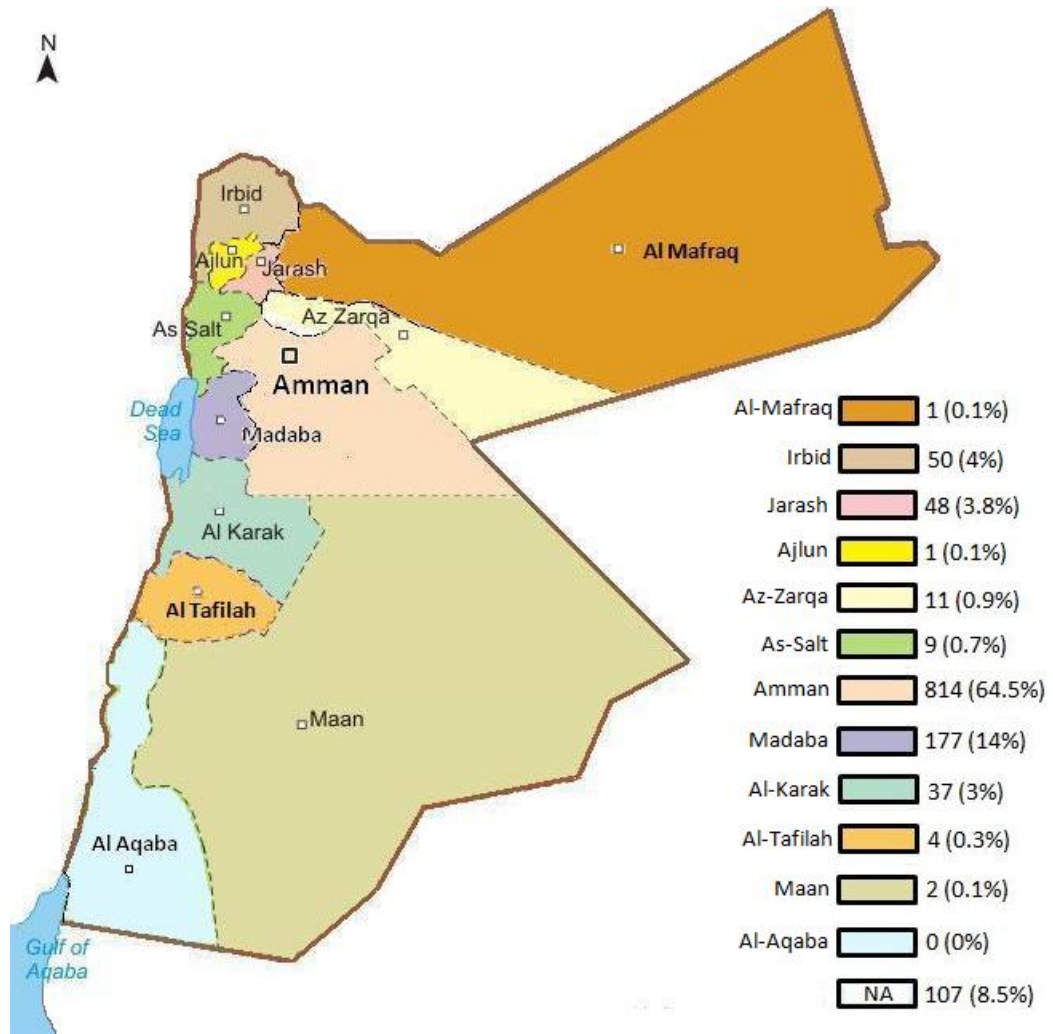


Figure 2: Geographical distribution and the governorate of residence for the equine cases

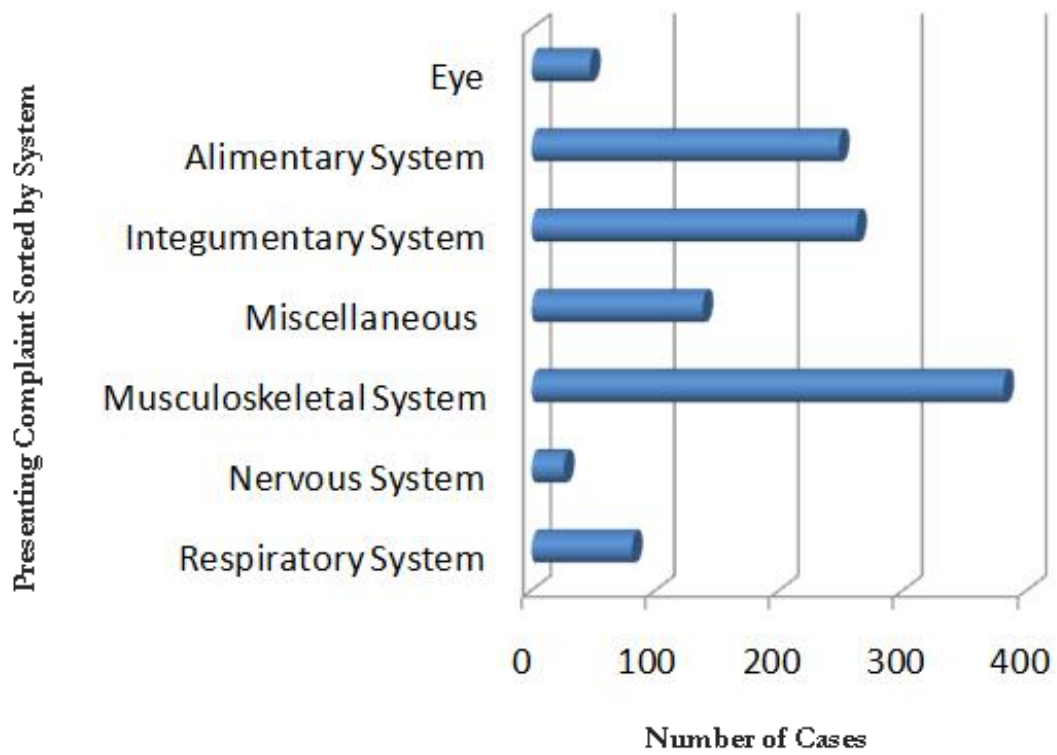


Figure 3: Classification of the presented complaints according to the body systems of the equine cases

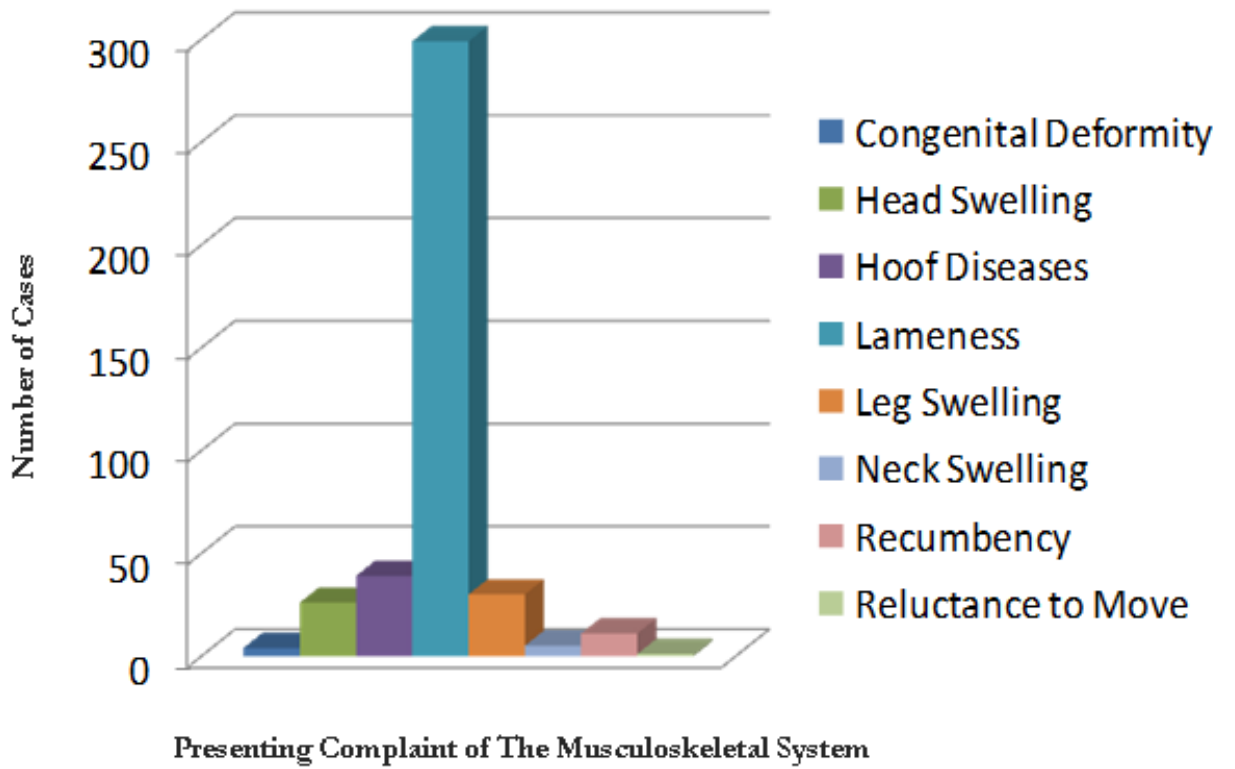


Figure 4: Presented complaints related to the musculoskeletal system

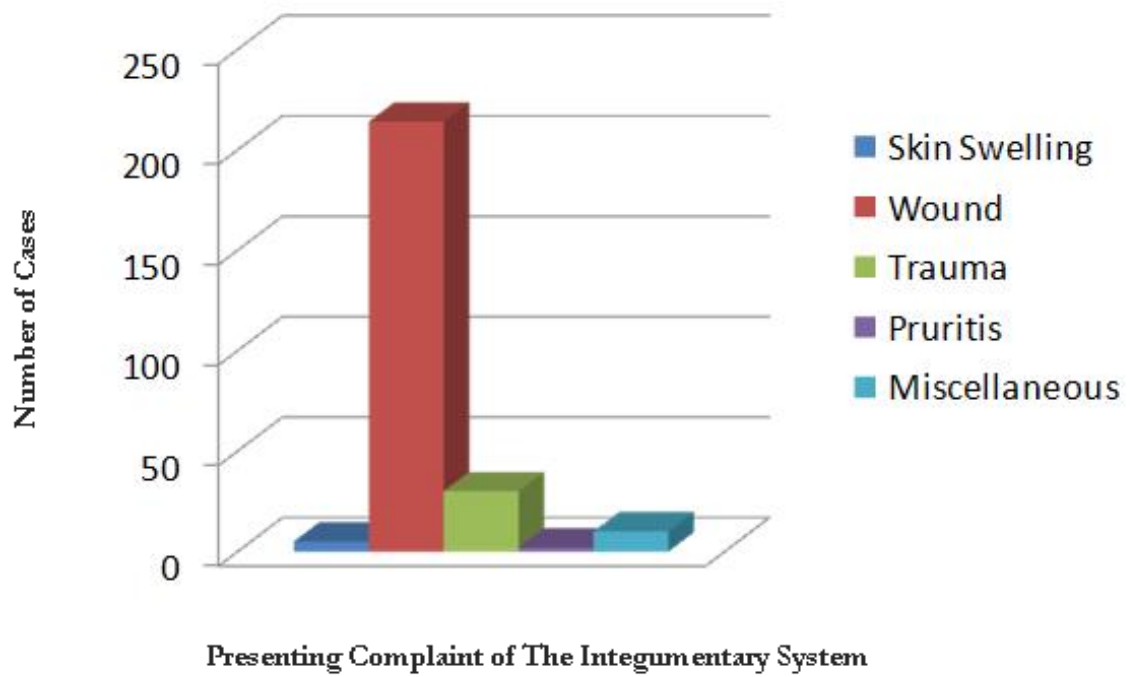


Figure 5: Presented complaints related to the integumentary system of the equine cases

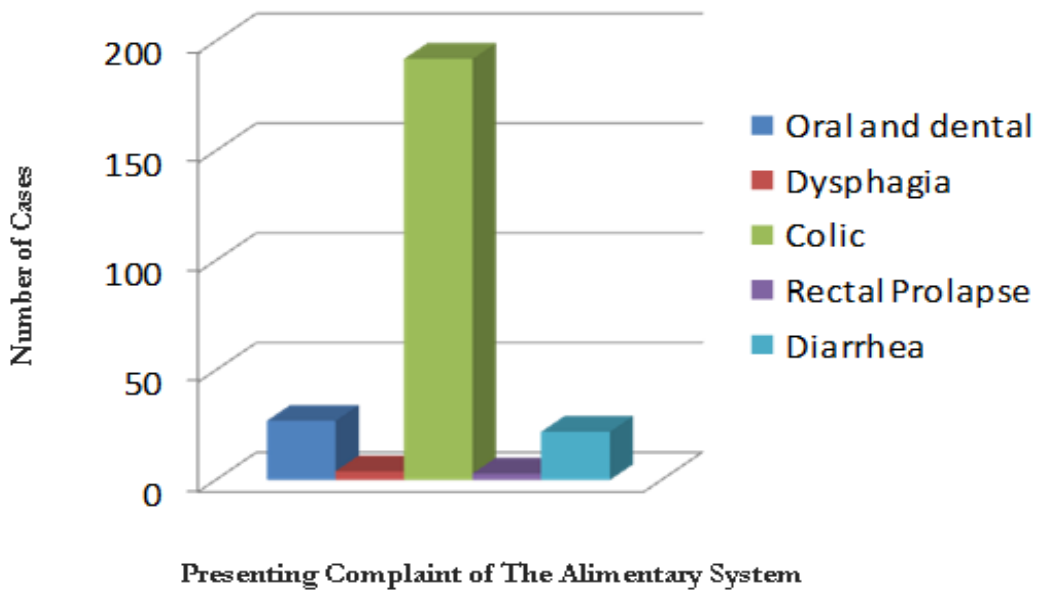


Figure 6: distribution of complaints related to the alimentary system of the equine cases

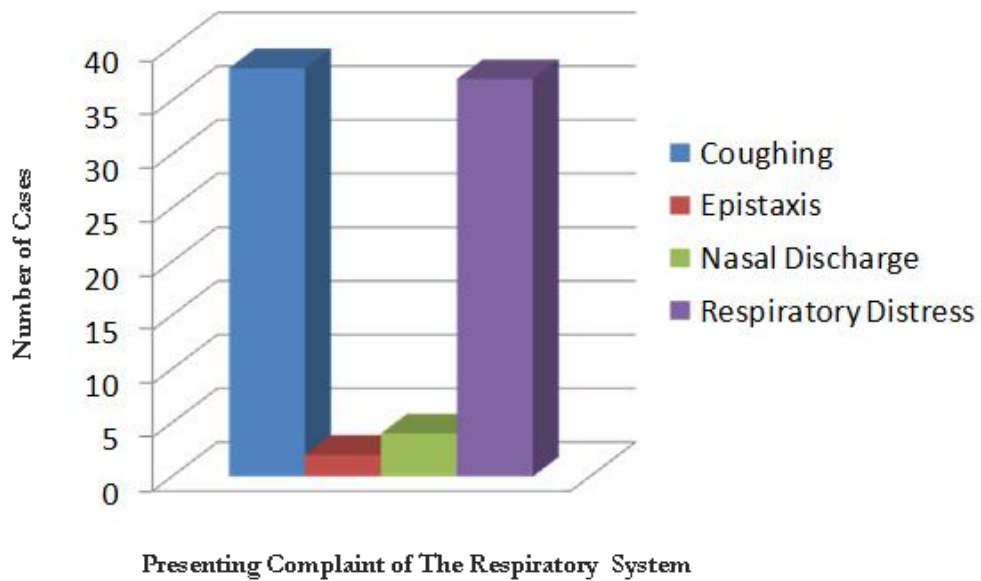


Figure 7: Presenting complaints related to the respiratory system of equine cases that were presented to the humane center for animal welfare in Jordan in a retrospective study that was conducted, using medical records between January 2007 and December 2009.

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دراسة أمراض الخيول والرفق بها في الأردن (1261 حالة)

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ملخص

تبحث هذه الدراسة في المشاكل الصحية المختلفة وقضايا الرفاه المحتملة للفصيلة الخيلية في الأردن. تم دراسة السجلات الطبية للفصيلة الخيلية والتي تمت معالجتها في المركز المركزي للانسانى للرفق بالحيوان على مدى ثلاث سنوات. 1261 حالة وافقت معايير الدراسة. انخفض عدد الحالات على مدى سنوات الدراسة السنين وقدمت معظم الحالات خلال أشهر الصيف. كانت هناك 1173 (93%) الخيول، 74 (5.9%) الحمير و 12 (1%) البغال. وقدمت معظم الحالات عن المشاكل المتعلقة بالجهاز العضلي والجلدي، والهضمي. كانت حالات العرج، و الجروح، والمغص هي أكثر الحالات المتقدمة. كان هناك 876 (69.5%) حالة تم ادخالها وتراوحت مدة الإقامة في المستشفى 1-141 أيام.

الكلمات الدالة: أمراض الخيول، الرفق بالخيول، الأردن.

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تاريخ استلام البحث 2013/5/8 وتاريخ قبوله 2013/9/26.