

FALCON MEDICINE IN THE MIDDLE EAST

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Summary

The article discusses the historical development of a specialized section of the avian medicine. The incidence of different diseases and medical problems of the falcons are related to the practising style of falconry and management of falcons in captivity. The progress of the falcon medicine has been closely related to the economic development of the region. It has changed an ancient tradition into a popular sport. The highly sophisticated falcon hospitals represent a high standard of veterinary care, and play a role in disease prevention as well as influencing the falcon management in the Middle East.

Introduction

The traditional Arab falconry has changed its image in recent years. In the past it served as a tool to survive in a hostile desert environment while in present times it is a sport, cultural heritage and an animal-man partnership. Falcon medicine has been influenced by these changes and has turned its image from an experimental veterinary field mixed with traditional medicine to a modern, very sophisticated, rapidly developing professional discipline playing an important role in disease prevention, treatment and research of falcons in the Middle East.

Historical Arab Falconry

In the past the falconers utilized the passage migratory species of large falcons such as saker (*Falco cherrug*) and peregrine falcons (*Falco peregrinus*) (Al-Timimi 1987). Both species were well adapted to the environment and passage birds represented that part of the population which already survived the most critical life periods and were able to tolerate captivity and partnership with man. Falconry birds were usually fed by the meat of their prey (usually houbara bustards and rabbits). When falcons were able to hunt, they provided a daily fresh source of food. Otherwise mutton and goat meat was the easiest available choice. The birds were fit enough at the time of trapping and were kept fit by daily hunting. Birds were rarely kept in captivity after the hunting season and so this minimized their chances of getting diseases. Because the falcons were used to catch much bigger and stronger prey than they hunted in the wild, a high level of fitness and health was required. Little value and care was dedicated for the ill and under-performing individuals. Falcon medicine started when the experiences of the older falconers were collected and passed from generation to generation. The early classification of the diseases and symptoms were recorded as *rhedad*-aspergillosis, *samoor*-pododermatitis, *jedry*-pox lesions (Samour and Cooper, 1993). At that stage the falcon medicine was utilizing traditional treatment methods such as branding with hot iron stick to treat dyspnoea or pox lesion, herbal treatment for bumble foot or sugar water for eye infections and diarrhoea. In those days falconry was not a mass activity or widespread. Only few experienced and dedicated people performed the training mainly for sheikhs and tribal rulers.

The Expansion of Arab Falconry and the Start of Modern Falcon Medicine.

The expansion of the Arab falconry throughout the Middle East began with the economic development of the petroleum industry in the second half of the 1970's. The growing wealth of the people in the region resulted in an increased demand for falcons with which to practice falconry. In these days, large numbers of the traditional prey, the houbara bustard (*Chlamydotis undulata*), were migrating to the Arabian peninsula. Falconry was this way affordable not only to the royalty but also to common people. Large permanent hunting camps started to operate on territories of rented hunting concessions and were dedicate for falconry. This kind of falconry was characterised by the use wild of caught birds that could be easily trained because they arrived physically fit from the wild. The main source of food was feral pigeons specially bred for training and feeding purposes. In contrast to the past, the best performing falcons were kept for moulting during the summer period. Such an increased demand for falcons resulted in specialised veterinary services being established to maintain the health of the valuable birds. The fist specialized falcon hospitals were founded in United Arab Emirates (Remple and Gross, 1993), and later in other Gulf countries. Parasitic diseases were important causes of morbidity. *Seratospiculiasis* in wild saker falcons and trichomoniasis (Samour *at al.*, 1996) caused by feeding feral pigeons were common findings. Keeping falcons during summer period for moulting in small rooms from palm tree leaves resulted in an increasing prevalence of aspergillosis. Unsuitable hard perching, commonly used blocks of salt instead of soft perching, caused severe pododermatitis known as bumble foot. The role of the veterinary care was to influence the management and husbandry sides of falconry and to prevent diseases.

Middle East Falconry in the Beginning of the New Millennium

Breeding of captive falcons and the influence of the western falconry style has markedly changed traditional hunting with falcons in Middle East countries. Very successful breeding projects mainly in Germany and USA have made the falcons widely available for the public. But strict implementations of CITES regulations has almost completely excluded the wild, illegally traded falcons from the local markets. The falconers have had to learn how to train and hunt with the captive bred falcons. The new gyr falcon (*Falco rusticolus*) hybrid species show much better characteristics suitable for hunting and have become very popular. At the same time they are much more prone to diseases and do not tolerate the hot climate. New training techniques have had to be introduced to make captive falcons fit. The Arab falconers have started to use balloons and kite to build fitness of the birds. Large, very productive breeding projects with fully air-conditioned rooms have been built almost in every Gulf country. Falcon medicine has expanded and many new, well equipped falcon hospitals have opened. Advanced laboratory techniques and diagnostic tools in conjunction with large number of clinical cases have made falcon medicine a rapidly growing specialization within the avian and exotic medicine field. Uniformly introduced vaccination programs have almost eliminated some of the most important viral diseases as Newcastle disease and falcon pox infections. The treatment and prevention of coccidiosis is important owing to the high incidence amongst captive bred, imported falcons (Forbes, 1987). Lack of natural sun light in fully air-conditioned breeding and moulting rooms, feeding boneless meat, has resulted in new phenomenon; bone deformities related to Vitamin D and mineral imbalances (Molnar and Ptacek, 2001). The sudden change in climate and transport related stress in freshly imported falcons from cold European or North American climates has increased the frequency of aspergillosis. A large international trade of falcons has introduced diseases rare for the region and specifically for the falcons in the region such as avian influenza or avian malaria (Molnar and Molnarova, 2003). Pigeons used as traditional falcon food have been replaced by commercially available frozen quails. This change has eliminated some of the frequent diseases such as trichomoniasis and herpes virus infection on the one side, but has introduced new health risks in form of clostridiosis. This has happened due to absence of hygiene and proper defrosting process when feeding frozen food. The falcon hospitals have played a major role in disease prevention and education of the local falconers.

The Future of Arab Falconry and Falcon Medicine

Arabic falconry as a tradition and heritage was based on the need to hunt the houbara bustard as a source of food for the families. A global, alarming decline of the world population of houbara bustard and severe political destabilization in countries where the falconry was performed in the past, are placing falconry in difficult, challenging situation. Thanks to an intensive captive breeding, the falcon has become a disposable "sport tool", but there is nothing left to hunt and nowhere safe to go hunting. The young generation, in this period of wealth and availability of food do not understand the need to train the falcon to obtain the daily meal. Thus falconry in Arabic countries is probably slowly heading from a mass public sport to a hobby of a few enthusiasts who will appreciate the beauty of the falcon and who will be willing to maintain the tradition of their ancestors. Thus falcon medicine influenced by these changes in captive falcon management has passed its expansion period. It has gained its importance in the veterinary and disease prevention field. But in all countries in the Middle East region, where falconry originates from a historical heritage, will be a demand for specialized, highly sophisticated institutions and services which guarantee the health care for valuable birds.

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