THE FACTS
ISSUE 8 • 2008
www.healthandhygiene.co.za
F10 PRODUCTS

THE USE OF F10 IN FALCON MEDICINE: PRACTICAL APPLICATIONS

Jaime Samour MVZ, PhD, Dip ECAMS **and Jesus Naldo DVM**
Wildlife Division, Wrsan, Abu Dhabi, United Arab Emirates

Introduction

Falcons and falconry have formed an integral part of life of the deserts of the Arabian Peninsula for thousands of years. In the past, Bedouin tribesmen, during the winter months, used to trap, train and hunt with migratory falcons in order to supplement their basic diet. The falcons were subsequently released in the spring, as the caring of these falcons throughout the year could strain their already limited resources. Today, after the hunting season, Arab falconers keep their falcons in air-conditioned rooms or aviaries during the long moulting months so they can be used again for the following season. As a byproduct of this change of attitude, a substantially large population of hunting falcons are kept in captivity every year throughout the Gulf countries. The need for professional health care to such a large captive population of falcons prompted the creation of modern falcon hospitals in most countries of the region.

Biosecurity programme

Falcon hospitals in the Gulf, in common with other medical facilities dedicated to the exclusive care and treatment of avian species somewhere else, are exposed to a wide range of pathogens from incoming out-patients. The need of designing and implementing a biosecurity programme that could prevent propagation and the spread of pathogens throughout the facility cannot be underestimated.

Housing a large number of falcons (e.g. falcon hospital, moulting facility and breeding programme) within the same facility could represent a potential risk of infection if a comprehensive biosecurity programme is not implemented.

One of the main pillars of any biosecurity programme is disinfection which could be defined as a procedure intended to eliminate, from a particular defined area, any pathogenic organism or to render them inert with one or a combination of chemicals. There are many products available in the market that could be used within a biosecurity programme. However, the authors have found F10 disinfectant products to be ideal for such undertaking due to its safety and non-corrosive properties and the unique synergic activity of its quaternary ammonium and biguanadine compounds acting against a wide range of viruses, bacteria, fungi and spores.

The following is an account of the uses of F10 products in our biosecurity programme used in our falcon medical facility.

Footbath access/exit quarantine/hospital wards

Footbaths should be installed in all entrance/exits of the quarantine station and isolation and hospital wards. F10SC is normally used diluted 1:250 and placed in shallow fibreglass or plastic trays. Very often a pad of plastic matting (Astroturf™) is placed within the tray in order to help cleaning the sole of soiled protective shoes. It is highly recommended to clean the tray and replace the solution everyday if the use is intensive. During the summer months, it is recommended to place the footbaths within the facilities to avoid evaporation due to prevalent hot and dry weather conditions.

Fogging medical facilities/falcon wards

Fogging air spaceswith F10SC

All rooms within a clinic or a hospital facility should be disinfected using a commercially available fogging unit two or three times a week or daily as required. The objective is to eliminate or drastically reduced airborne pathogens and to disinfect all contact surfaces and inaccessible or difficult to reach areas. Fogging has been particularly important in clinical examination and post-mortem room facilities during the handling of suspected cases of Newcastle disease and avian influenza. The recommended dilution commonly used for fogging is 1:250 using either F10SC for post-cleansing disinfection or F10CXD for a more comprehensive cleansing and disinfection procedure.

Surface disinfection - medical facilities/ falcon wards

During the falconry season, hundreds of falcons are admitted in falcon specialist hospitals in the Middle East for clinical examination or for treatment. In the course of a normal day, it is not uncommon to handle 20 to 40 or more falcons undergoing a diverse array of clinical conditions including trichomonosis, aspergillosis, Newcastle disease and avian pox. The need of implementing an adequate disinfection protocol of work tops, tables, door handles, sink and others cannot be overemphasized. Adequate disinfection can be carried out using a hand spray using F10SC or F10CXD in a dilution 1:250 and disposable paper towels.

High level surface disinfection using F10SC

FACTS IN THIS ISSUE

BIOSECURITY, FOGGING, NEBULISING, FLUSHING, BUMBLE FOOT, INCUBATION

BIRDS OF PREY

WILDLIFE MEDICINE

SMALL ANIMALS & EXOTICS

F10® PRODUCTS

THE FACTS

Surface disinfection incubation, hatching and rearing rooms, egg disinfection.

Falcon captive breeding programmes have become very popular in some countries in the Middle East, but in particular in the United Arab Emirates due to a ban on the use of wild-caught falcons in the sport of falconry. This is in agreement with the legislation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). At our facility we use F10 products in the general disinfection of incubation, hatching and rearing rooms and for the sanitation of eggs. Prior to the breeding season the rooms are thoroughly cleaned and disinfected including fogging and spraying of worktops. Similarly, the equipment is cleaned and sprayed using a solution of F10SC at the dilution 1:250. Eggs are usually sprayed with the same solution and allowed to dry on racks prior placement within incubators.

Therapy

Nasal and sinal flushing in the therapeutic management of upper respiratory disease

Nasal and sinus flushing are an integral part of the therapeutic management of clinical conditions affecting the upper respiratory system in falcons. The flushing solution is commonly prepared using F10SC diluted 1:250 with saline. A 20 ml syringe is filled up with the flushing solution. A modified rubber cup is placed on the tip of the syringe before applying this to the opening of the nares. The solution is gently injected in the nares and exists through the choana. The procedure is repeated on the contralateral side if the medical condition is bilateral. It is usually recommended to repeat the same procedure twice a day for 5 to 7 days depending on the severity of the infection. Surgical debridement to remove caseous masses within the different diverticula of the infraorbital sinuses is very often required in falcons as part of the post-operative treatment of infections with *T. gallinae.* After the surgical removal of caseous masses and seropurulent exudates, the flushing of the sinus with the same solution and using a cannula is highly recommended.

F10SC solution administered through the nares

Nebulisation in the therapeutic management of lower respiratory diseases

Air sacculitis of fungal and bacterial origin is very common in falcons in the Middle East. The diagnosis is commonly made through a combination of survey radiographs, haematology analyses and endoscopy. The collection of biopsies and microbiology swabs during endoscopy examinations are indispensable in the differential diagnosis. The therapeutic management depends largely on the results of the examination of the samples collected. Nebulisation is commonly used in the therapeutic management of lower respiratory system in falcons. At our facility we use a custom-made chamber constructed out of laminated plywood to ease the cleansing and disinfecting procedures. The chamber is provided with an observation window covered with Plexiglas to allow observation of the falcon during nebulisation. The chamber is connected to a nebulising unit capable of producing a particle size smaller than 5µm. A solution of F10SC in saline 1:250 is used once or twice a day for up to 6 to 8 weeks depending on the severity of the case. Food retention in the crop has been reported if the falcons are immediately fed after nebulisation. It is recommended to nebulise falcons in the morning and at midday and to allow a minimum of 4 hours rest period before offering any food to the falcons.

Purpose built chamber to nebulise using F10SC

Foot baths in the therapeutic management of bumblefoot

Bumblefoot is the single most important medical condition affecting hunting falcons in the Middle East. Predisposing factors include lack or sudden cessation of exercise, nutritional deficiencies and inadequate perches. At our facility we use disinfectant footbaths as part of the therapeutic management of bumblefoot. A plastic tray, firmly attached to a falcon stand is filled out with a warm (41°C) solution of F10SC diluted 1:250 with saline. A cut out piece of plastic matting (Astroturf™) is placed at the bottom of the tray to avoid further pressure sore injuries. The falcon is allowed into the bath for periods of up to 30 min twice a day. Supervision by a veterinary technician during this period is essential. Early bumblefoot stages benefit by applying F10 Germicidal Barrier Ointment after the bath.

Purpose built foot bath containing F10SC solution

Conclusion

F10 disinfectant products have formed an integral part of our biosecurity programme at our falcon facilities for many years. All of the F10 products use the same active ingredients, but due to the complex interaction of the different components resistance or residual build-up is very unlikely to occur. The F10 disinfectant products have also proved useful as adjunt components in the therapy of several medical conditions and it has been invaluable for general use around the practice. The versatility of F10SC Veterinary Disinfectant, in particular, in worth highlighting since, although a high performance product, it is safe and therefore easy to use in a wide range of applications and procedures at the multi-purpose concentration of 1:250.

F10 PRODUCTS LTD
Unit 7, Windmill Road, Loughborough, LE11 1RA, UK
Freephone: 0800 014 8803 • Fax: 01509 265777
Email: orders@f10products.co.uk • info@f10products.co.uk
www.f10products.co.uk

Manufacturer of F10 Products:
Health and Hygiene (Pty) Ltd
P.O. Box 906, Florida Hills, 1716, South Africa
Tel: +27 11 474 1668 • Fax: +27 11 474 1670
www.healthandhygiene.co.za • www.f10products.co.za