Wildlife Care

Amy Colling

RSPCA Mallydams Wood Wildlife Centre

Outline

- Wildlife Rehabilitation
- Assessment and Initial Care
- Further investigation - xray
- Common Conditions and Treatments
  - Pigeons and doves
  - Gulls
  - Swans
  - Other birds
  - Hedgehogs
  - Foxes

Wildlife Rehabilitation

The Aim

- All animals to be released back into the wild
- Must be in as fit a state to survive as wild counterparts of same species, sex, age
- Physically and behaviourally able to independently feed, breed and compete for resources.

Decision Making

- Injury
- Species
- Sex
- Age
- Animal Welfare
- Time of year
- Resources
- Location
- Legal
- Risks to staff
- Facilities available

Decision Making

- What we can do vs what we should do
- Wildlife vs domestics
- Amputations/fracture repairs/long stay in care
- Public expectation

Assessment and Initial Care

History and Triage

- Where found
- Admit Reason
- Previous treatment/medication
- How long been in care
- Triage

Triage

- Immediate release
- Immediate euthanasia
- Transfer for assessment and treatment
- Patient dies

Quick Release

- Some cases can be turned around quickly and do not need to be transferred:
  - Healthy adult hedgehogs
  - Simple entrapments?
  - Educate clients to not pick up fledglings

Immediate Euthanasia

- In extremis
- Extensive soft tissue trauma
- Emaciated
- Open fracture
- Skull fracture
- Missing limb
- Permanent disability
- Severe Disease eg: flystrike
- End stage disease eg: myxi
- Eyes closed mammals/naked chicks

Clinical Exam

- Harder – Small wounds, mask pain
- CARE – birds of prey play dead
- History → In box exam → Hands off out of box exam → Hands on exam
- Smell
- WEIGHT
- Place on floor – gait, wing carriage
- Assistant and towel helpful for full body

Clinical Exam (2)

FULL BODY EXAM

- Eyes – Birds of prey
- Mouth (care- H&S) – trichomonosis, MBD
- Clavicle and corocoid
- Palpate along wing, test for full ROM (shoulder)
- Palpate legs, test grip/reflexes
- Blow feathers for wounds/emphysema
- Feather damage – snapped, white feathers, fret marks

Reasons for PTS

EYES

- Detached retina/blind

FEATHERS

- >50% primaries lost in gull/bird of prey/wood pigeon
- White feathered corvids
- Multiple Fret marks – lines across the vane/ragged breaks affecting primaries/tail feathers

Reasons for PTS (2)

- MBD in collared doves
- Severe Trich /other contagious diseases
- Paralysed
- Traumatic joint injury/luxation (except corocoid luxation off keel)

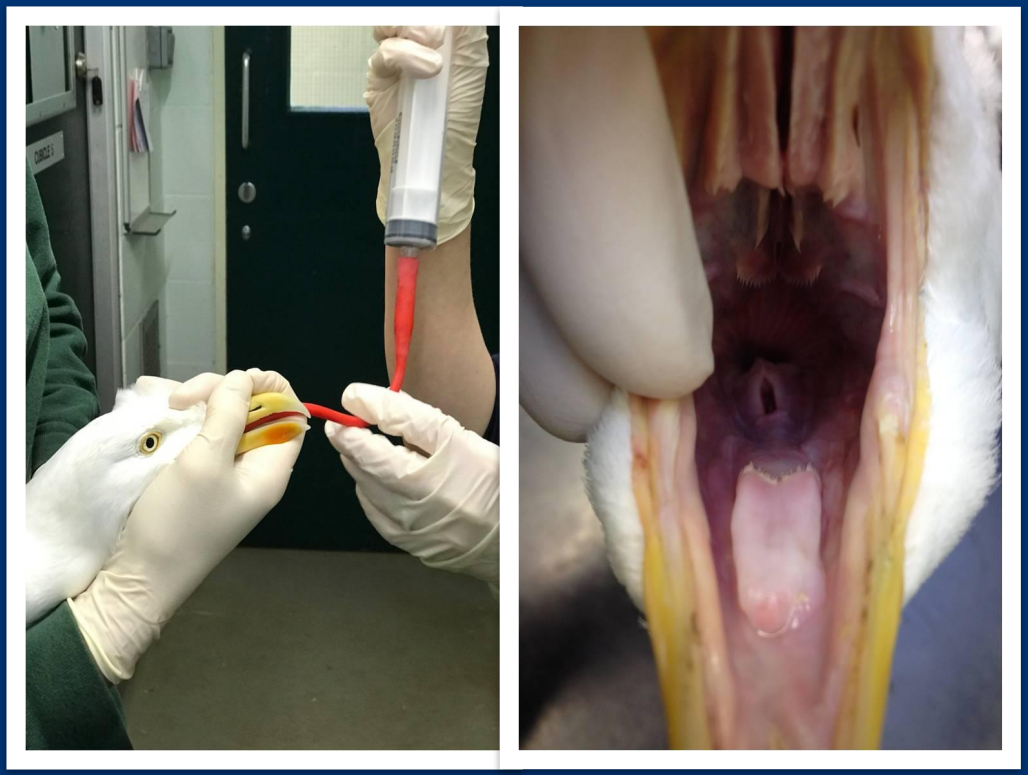
First Aid/Stabilisation

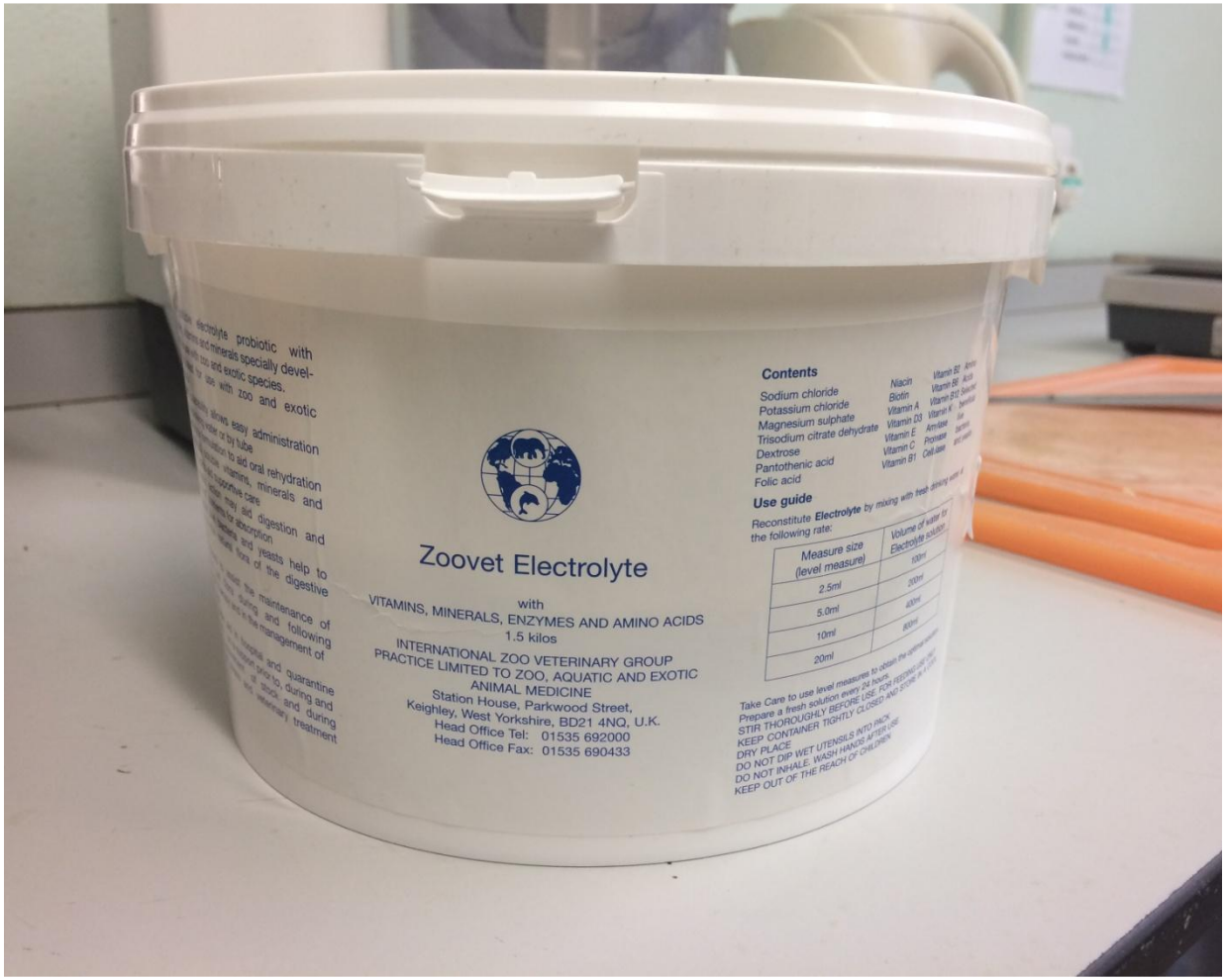
- Fluids
- Pain relief
- Fracture stabilisation
- WARMTH
- Quiet
- Dark

Fluids

- Oral (birds) or S/C (small mammals/birds) or IV (large mammals)
- 25ml/kg crop tubing
- 20ml-50/kg S/C fluids (1-2 sites)
- Warmed
- Electrolytes/glucose

Fluids




Zoovet Electrolyte
with
VITAMINS, MINERALS, ENZYMES AND AMINO ACIDS
1.5 kilos
INTERNATIONAL ZOO VETERINARY GROUP
PRACTICE LIMITED TO ZOO, AQUATIC AND EXOTIC
ANIMAL MEDICINE
Station House, Parkwood Street,
Keighley, West Yorkshire, BD21 4NQ, U.K.
Head Office Tel: 01535 692000
Head Office Fax: 01535 690433
Contents
Sodium chloride
Potassium chloride
Magnesium sulphate
Trisodium citrate dehydrate
Dextrose
Pantothenic acid
Folic acid
Niacin
Biotin
Vitamin A
Vitamin D3
Vitamin E
Vitamin C
Vitamin B1
Use guide
Measure size (level measure)
Volume of water for Electrolyte solution
2.5ml
5.0ml
10ml
20ml
KEEP CONTAINER TIGHTLY CLOSED AND STORE IN A COOL
DRY PLACE
DO NOT DIP WET UTENSILS INTO PACK
DO NOT INHALE. WASH HANDS AFTER USE
KEEP OUT OF THE REACH OF CHILDREN

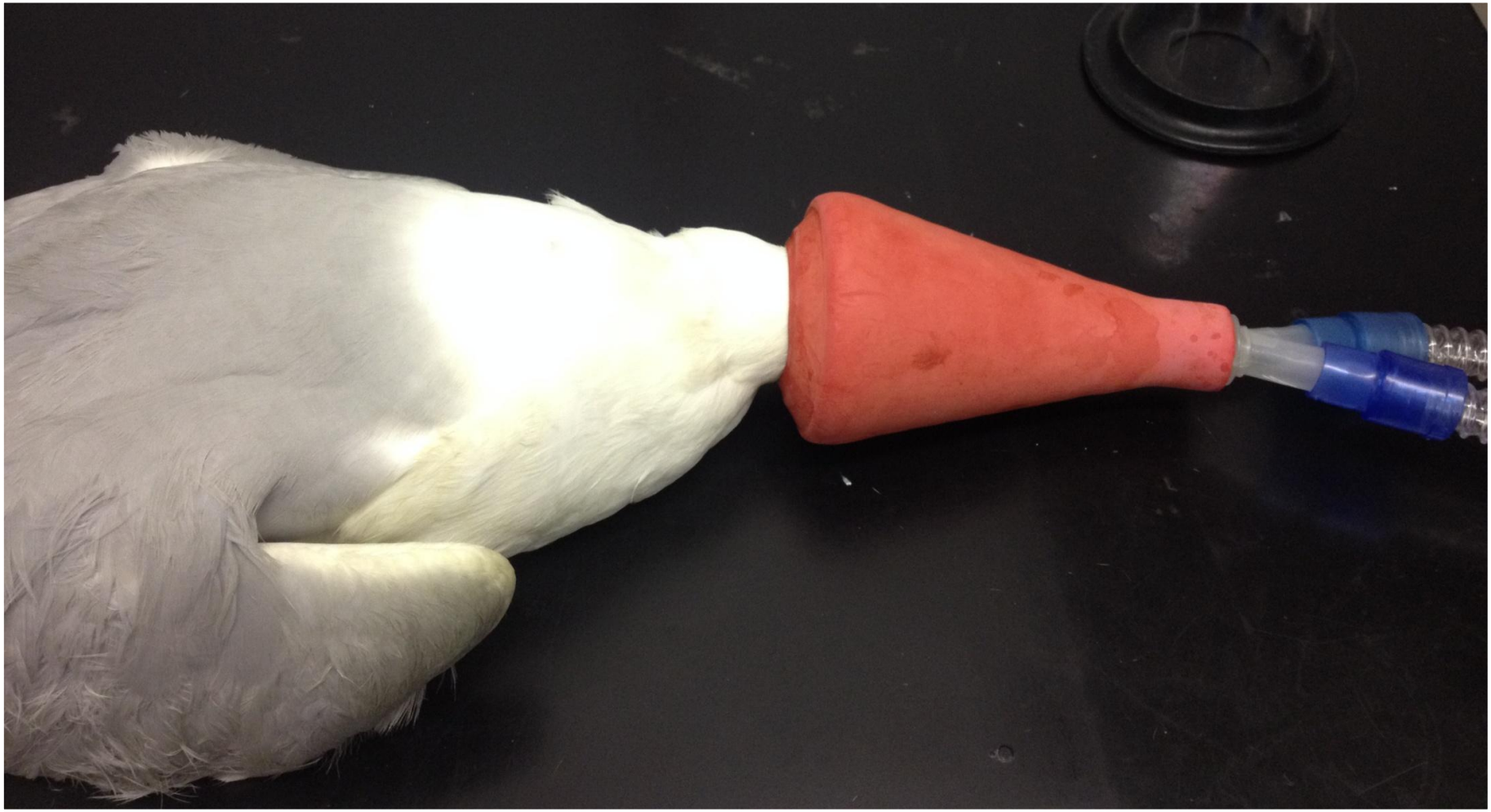
Pain Relief

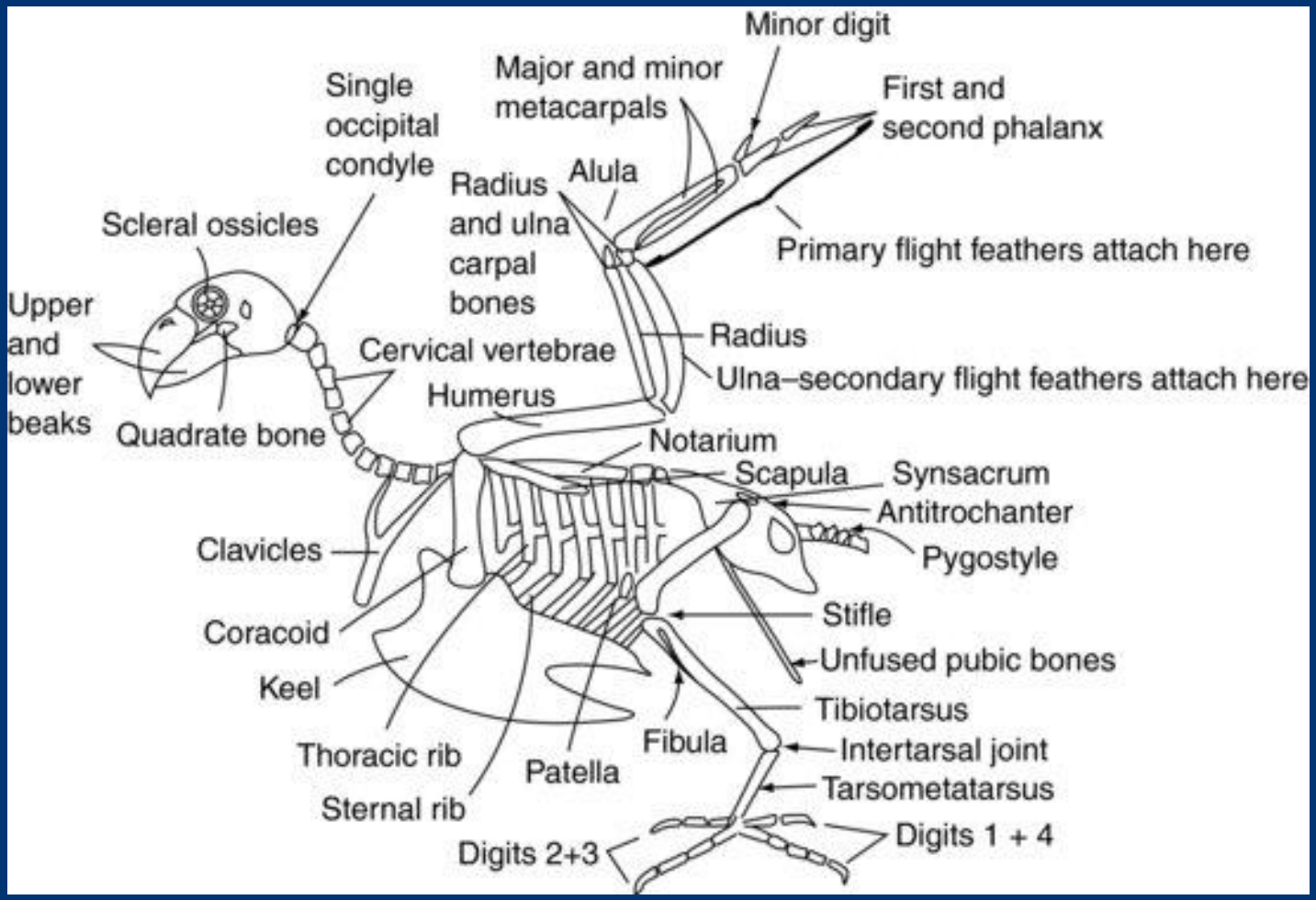
- **Meloxicam**
- Birds - 0.3-1mg/kg (0.3-5mg/kg) SID or BID
- Hedgehogs – 0.5mg/kg
- Rabbits – 0.6mg/kg
- Foxes – 0.1mg/kg
- Care – Dehydration (+blood loss in birds)
- Birds – **Torb** -2-4mg/kg q2hours
- **Vetergesic** – 0.3-0.6mg/kg q

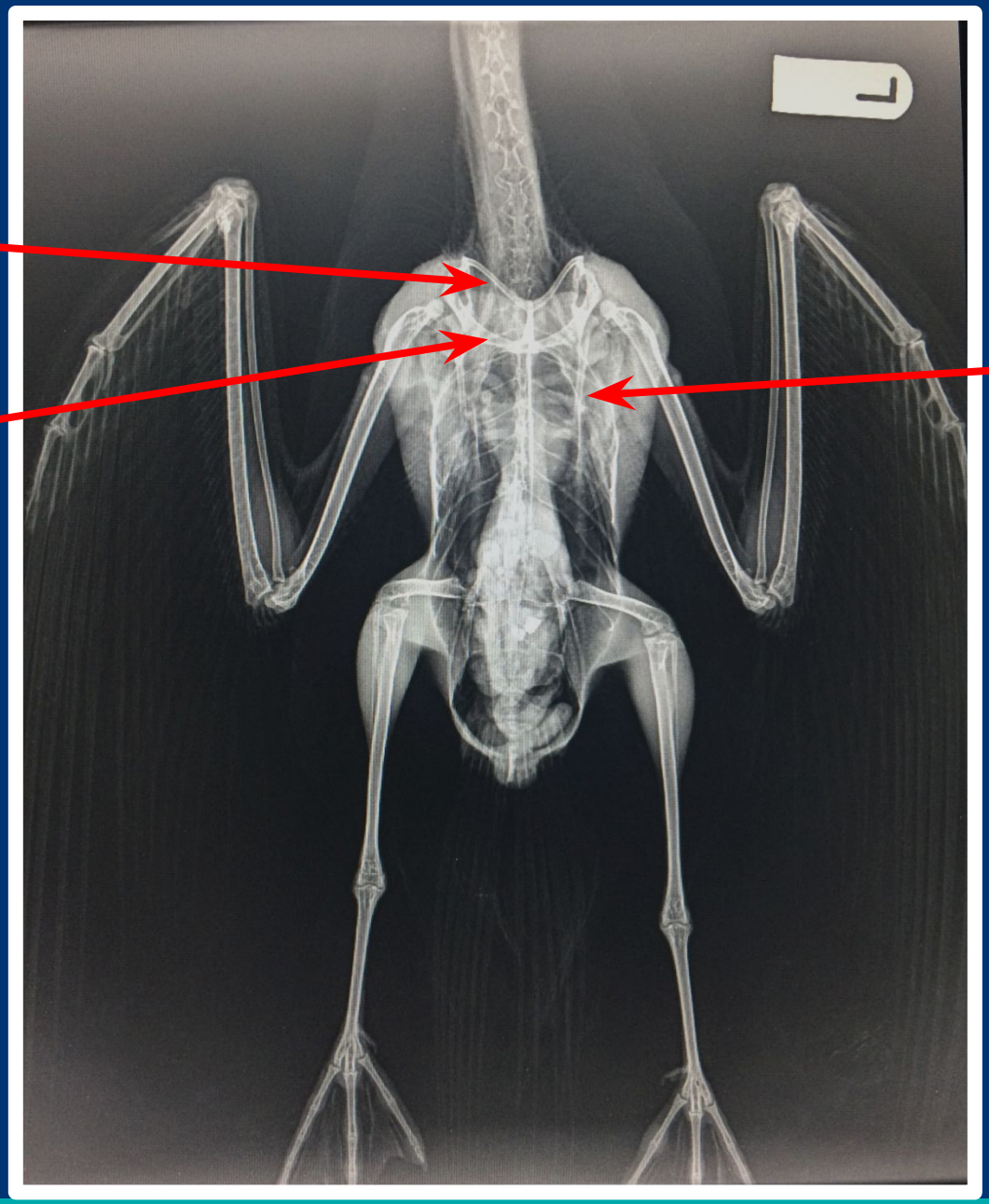
Further Investigation

GA and Xray

- Most hedgehogs GA to examine
- V/D and Lateral Views in all birds
- Iso 5% induction and 3% maintenance
- O2 Flow rate 0.7L/min – 3L min (2L/min for gull)
- Keep warm
- Empty crop (do not starve small birds)
- Monitor for apnoea




Minor digit
Major and minor metacarpals
First and second phalanx
Single occipital condyle
Radius and ulna carpal bones
Alula
Scleral ossicles
Primary flight feathers attach here
Upper and lower beaks
Cervical vertebrae
Radius
Ulna–secondary flight feathers attach here
Humerus
Quadrate bone
Notarium
Scapula
Synsacrum
Antitrochanter
Pygostyle
Clavicles
Stifle
Coracoid
Unfused pubic bones
Keel
Tibiotarsus
Fibula
Intertarsal joint
Thoracic rib
Patella
Tarsometatarsus
Sternal rib
Digits 1 + 4
Digits 2+3


Clavicle
Corocoid
Scapula

Not flying

Sparrowhawk

Reasons for PTS

- Shot in abdomen/thorax/joint
- Fracture close to joint
- Non –simple corocoid fractures
- Major trauma
- Pelvic fracture in female

Common Conditions and Treatment

Pigeons and Doves

Reasons for admissions

- Orphans
- Collisions – Windows/cars
  - Check corocoid/clavicles
- Attacked by another animal – cat/BOP
- Shot – X-ray
- Disease – Trich, pox, PMV, ticks
- MBD
- Racing pigeons

RSPCA

First Aid/Stabilisation

- As previously discussed –
  - Warmth
  - Pain relief (meloxicam/torb/buprenorphine)
  - Fluids 5-30mls crop tubing
- Kaytee Exact

Euthanasia

- Trichomonsis in wood pigeons/severe in others
- Neuro (unless hx of head trauma)
- Pox
- Respiratory signs/conjunctivitis - Psittacosis
- Emaciated
- Severe MBD in collared doves
- Extensive feather loss
- Adult wood pigeons – need quick turnaround
- Can't fly – test range of movement all joints
- Swollen multiple joints - Salmonella

Orphans

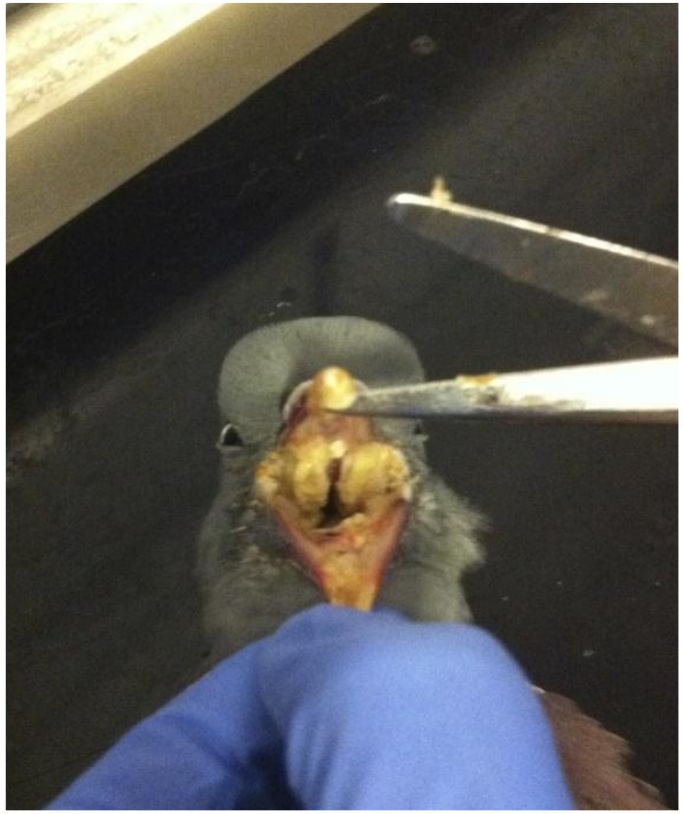
- Breed all year round
- Do not mix wood pigeon and feral pigeon squabs
- Crop feed every 3-4 hours
- High risk of nutritional secondary hyperparathyroidism (MBD)
  - Vetark Zolcal 0.1ml/100g daily for 7 days or until self feeding


exact nutrition
KAYTEE
exact
HAND FEEDING
Baby Birds - Nestlinge
Oisillons - Polluelos
WITH DHA OMEGA-3
For Growth and Development!


ZOLCAL
liquid calcium and vitam
veterinary support
VETARK
PROFESSIONAL

Trichomonosis

- Carriers
- Oral Cavity/Crop
- Highly contagious
- Harkers as prevention to all pigeons/doves EXCEPT WOOD PIGEONS
- Mild cases - Metronidazole treatment (1.2ml/kg)



Wounds

- Scalp wounds heal well
- Debride, clean and suture
  - no tension
- Care creams/bandages

causing secondary problems

- Antibiotics
  - Amoxy/clav 125-150mg/kg

Gulls

Reasons for admissions

- Orphan/inexperienced juvenile
- Shot
- Toxicity/botulism
- Attacked by another animal
- Fishing litter
- Caught/entangled
- Oiled/contamination
- Other injury/disease

Facts

- 3 common species
- Can live 30 years
- One clutch starting in May
- Need appropriate food for care – fish/Piscivore/not cat and dog food
- Avoid wire fronted cages/cat baskets – feather damage

Examination

- Careful handling
- Towel
- Restrain head – sharp beak
- Watch on floor – wing carriage/normal flap
- Clavicle/corocoid injuries
- X-ray all adult gulls – large amount shot

They will eat anything !

Orphans

- Strict triage – sick/under 60g PTS
- Groups of 2-3
- Chopped/minced sprats/ whitebait in water 4 xday
- No water bowel- wet
- Faecal contamination
- Panacur 50mg/kg

Botulism

- Acute/good BCS
- Weak/cannot stand
- Poor jaw tone
- Green faeces
- Symptomatic

  treatment if can lift

  head

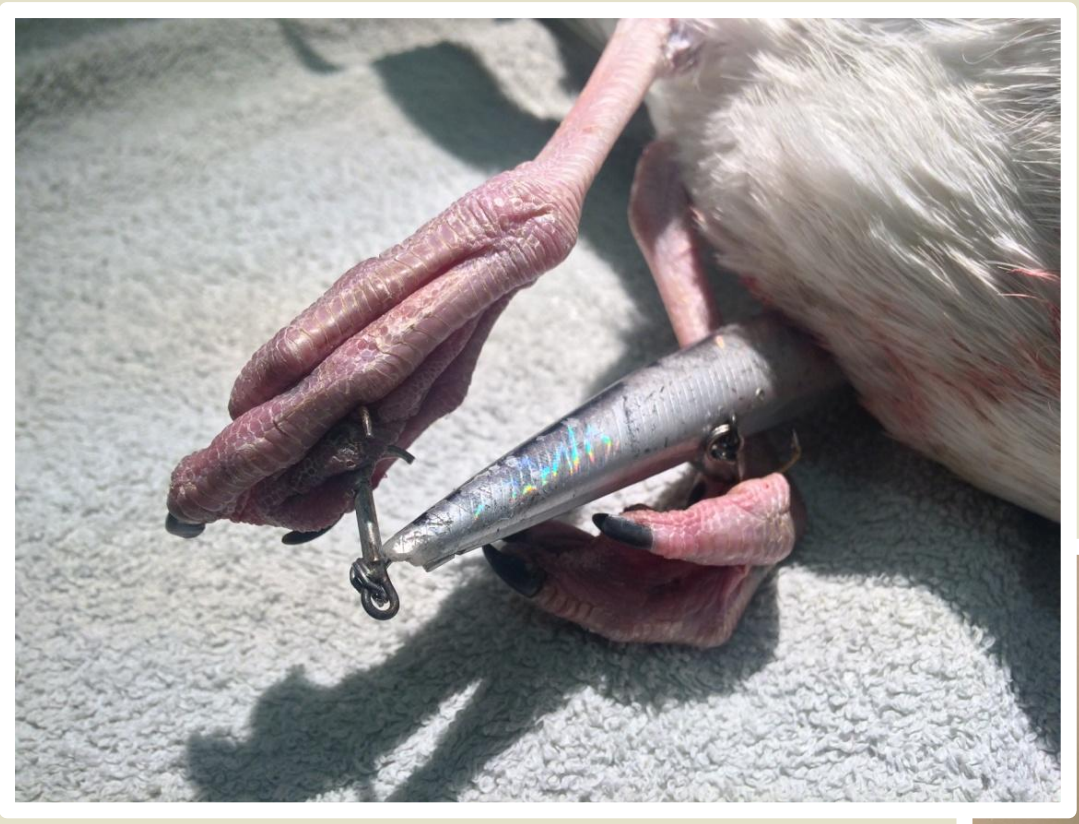
- Tube 4 times daily with

  zoolyte/piscivore

Botulism?

Fishing Litter/Netting

- Simple entanglements – quick release?
- Wounds/problems can develop later
- Distal wing odema – poor prognosis
- Hooks – endoscopy/surgery, small hooks in gizzard can be left
- Feather damage



Problems in Care

Swans

Facts

- Pairs defend territory
- Cygnets around April
- Full moult July/August- Flightless
- Full adult plumage in 2 years

Reasons for Admission

- Orphans
- Collisions -powerlines
- Crash landing -roads
- Fishing litter
- Attacked by another animal
- Shot

Reasons for Euthanasia

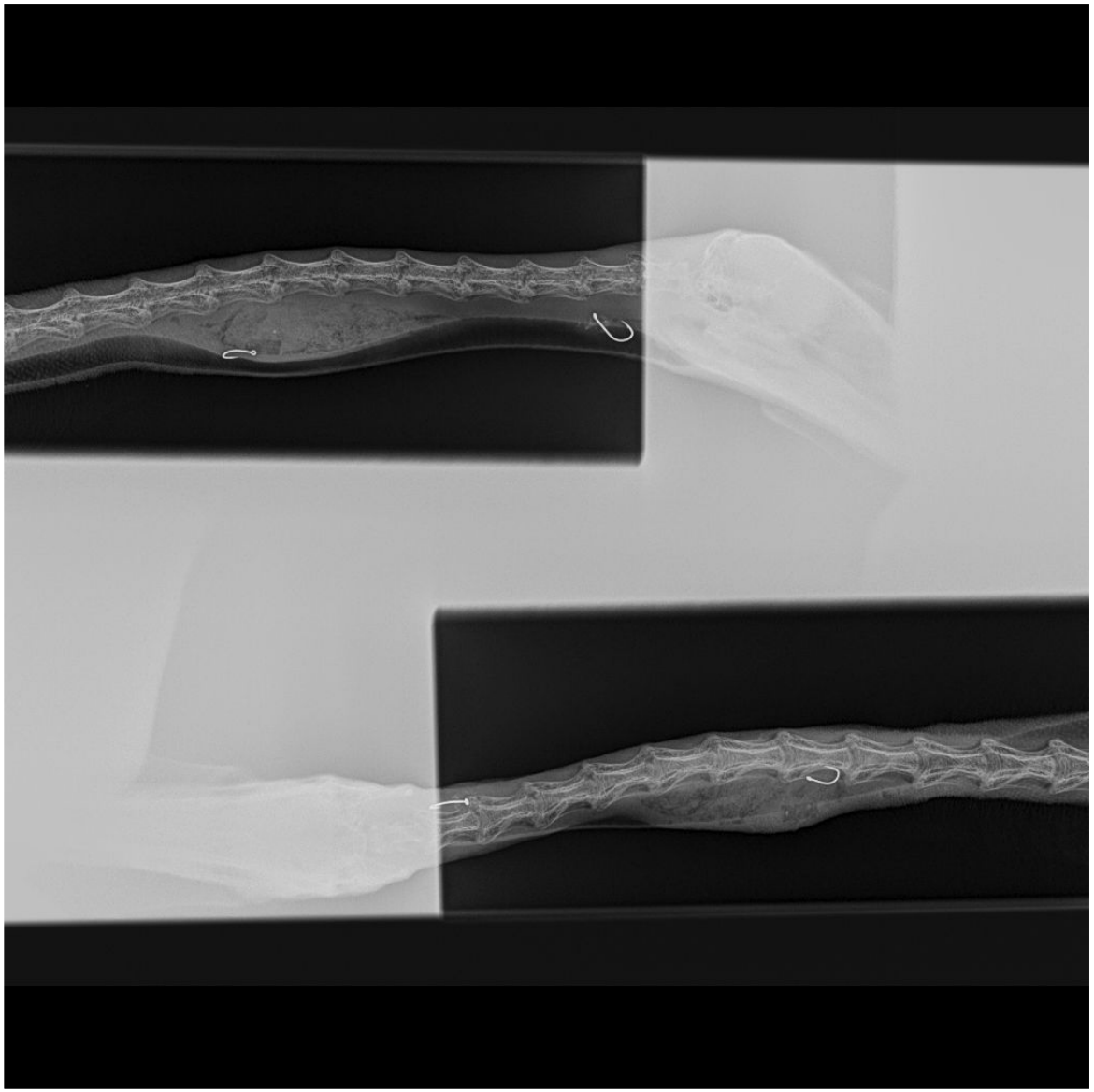
- Emaciated/under 6k g (adults)
- Fractures
- Large wounds
- Large keel lesions
- Feet/severe bumblefoot
- Not responding to treatment

In care

- Fluids – oral or I/v
- Care keel lesions if recumbent
- Suitable restraint - wings
- Radiographs to rule out corocoid fracture in collisions/crash landings
- Can take conscious radiographs or GA with propofol or Med/ket
- Dog attack wounds can be extensive

Fishing Litter

- Do NOT cut the line!
- Line can be looped around back of tongue
- Ingested hook or caught in skin
- Full body radiographs
- Small hooks in Gizzard can be left
- Surgical removal or endoscopy



RSPCA

Other Birds

Reasons for admission

- Predation/CBC
- Orphan
- Window strike
- Grounded - swifts
- Starvation – migratory birds
- Disease
- RTC – check eyes in all birds of prey
- Oiled (seabirds)

Stabilisation/Care

- Minimal initial exam if shocked
- Incubator
- Dark
- Low stress/away from predators
- Fluids – oral or S/C
- Window strike – initially stunned and can recover in
- Stabilise fracture
- Sea birds – Itrafungol 15mg/kg prophylactic

Reasons For Euthanasia

- Compound fractures
- Large wounds/involving muscle
- Fractured beak
- Severe sub-cut emphysema/air sac damage
- Emaciated – Trich?
- Disease – pox
- Blind in 1 eye birds of prey

Cat caught birds

- Blow feathers, look for small wounds
- Check carefully for fractures, large skin tears – PTS
- Internal Injuries
- Sub cut emphysema - drain
- **ALL** need antibiotics even if no visible wound (Pasteurella)
- Amoxy-clav 125 - 150mg/kg BID first choice
- Meloxicam 0.3-0.5mg/kg – can dilute 1:10

Parasites

- Lice – Frontline
- Ticks – Can cause large swellings around face
- Capillaria – buzzards/kites (ddx – Trich)
  - Fenbendazole 20mg/Kg SID 5 days
- Gapeworm (syngamus trachea) –Corvids, Starlings, Blackbirds, Raptors
  - Fenbendazole 25mg/kg SID 3 days (50mg/kg twice 48 hrs apart for raptors)

Orphans

- Fledglings often incorrectly brought into care
- PTS blind/naked chicks
- Time consuming
- Feed q 30mins – care feather contamination
- Correct diet
- Group by size
- Good hygiene

Hedgehogs

Facts

- Mostly solitary
- Large home range
- Nocturnal
- Hibernate Nov- Mar (fatalities)
- Breeding April-September
- Ave 2-3 years

Reasons for admission

- Abnormal behaviour/Out during the day
- Orphans
- Underweight autumn juveniles
- Attacked by another animal – Dog/fox/badger
- Wounds/Burns –strimmer/bonfire
- Disease – ringworm, lungworm
- Entangled/trapped
- Collapsed

Reasons for Euthanasia

- Nasal damage
- Spinal damage
- Missing leg (do not amputate)
- Severe ringworm/flystrike
- Chronic respiratory disease
- Compound fractures
- Pelvic fractures (female)
- Less than 55g/eyes closed
- Blind

First Aid/Stabilisation

- Warmth
- Sub cut fluids
- Quiet
- Pain relief
- May not be able to uncurl without GA but need to stabilise first

Examination

- Hard to uncurl – stroke rump/ from cranial to caudal
- Weight and body condition
- Faecal sample
- Signs of ill – health –
  - Smell!
  - Lots of parasites/ticks in 1 area
  - Leg protruding
  - Thin

General Anaesthesia

- Chamber induction
- FULL examination
- Mouth – teeth
- Nose
- Eyes
- All limbs/mobility
- Spines/skin
- Radiographs

Orphans

- Eyes open/over 55g
- Group litter mates together
- Hygiene
- Enteric disease
- Toilet
- Little and often – goats milk/esbilac and recovery

Autumn Juveniles

- Late litters
- Too small to hibernate (less than 500g)
- Out during the day
- Parasites/lungworm
- Faecal sample
- Can release over winter

Lungworm

- Sneezing, Coughing, Nasal discharge
- Increased resp rate/effort/noise
- Inappetance/weight loss
- Can get chronic/permanent effects
- Juveniles – treat all or get faecal sample
- Crenosoma striatum larvae +/- capillaria aerophila eggs
- Intermediate host & maternal transfer

Photograph / Copyright - Dru Burdon

Capillaria aerophila - eggs

Crenosoma striatum - Larvae

Crenosoma striatum
(lungworm) larvae

Photograph / Copyright - Dru Burdon

Capillaria aerophila - egg

Photograph / Copyright - Dru Burdon

Images from
http://wildpro.twycrosszoo.org/S/00dis/Parasitic/Hedgehog_Lungworm_Inf.htm

Lungworm Treatment

- Early treatment important – PTS extreme cases
- Levamisole 27mg/kg q 48hrs for 3 doses (0.35mls/kg)
- Ivermectin 0.5mg/kg injection
- Bisolvon daily for 7 days
- Antibiotics (Amoxyclav 35mg/kg or Enrofloxacin 20mg/kg)
- Dexadresson – 1mg/kg SID 3 days

Ringworm

- PTS extreme cases
- Zoonotic
- Does not fluoresce
- Asymptomatic
- Concurrent Caparinia mite
- Terbinafine 100mg/kg BID or Itrafungol 10mg/kg

Veterinary Dermatology

Vet Dermatol 2016; **27**: 500–e133 DOI: 10.1111/vde.12378

Comparison of two systemic antifungal agents, itraconazole and terbinafine, for the treatment of dermatophytosis in European hedgehogs (*Erinaceus europaeus*)

Steve Bexton and Helen Nelson

Royal Society for the Prevention of Cruelty to Animals (RSPCA) East Winch Wildlife Centre, Station Road, East Winch, Kings Lynn, Norfolk, PE32 1NR, UK

Correspondence: Steve Bexton, Royal Society for the Prevention of Cruelty to Animals (RSPCA) East Winch Wildlife Centre, Station Road, East Winch, Kings Lynn, Norfolk, PE32 1NR, UK. E-mail: steve.bexton@rspca.org.uk

Background – Dermatophytosis caused by *Trichophyton erinacei* is a common scaling and crusting skin disease affecting European hedgehogs (*Erinaceus europaeus*) admitted to wildlife rescue centres. The application of topical therapy can be challenging because wild hedgehogs are subject to stress and often roll into a ball when handled. Systemic antifungal therapy is more convenient but has not been evaluated in this species.

Hypothesis/Objectives – To compare the efficacy of oral itraconazole versus oral terbinafine for the treatment of dermatophytosis affecting hedgehogs.

Animals – A treatment trial was undertaken in a wildlife hospital involving 165 hedgehogs with naturally occurring dermatophytosis.

Methods – Animals were randomly divided into two groups and treated with either itraconazole or terbinafine orally for 28 days. The therapeutic efficacy was evaluated after 14 and 28 days by mycological culture and clinical dermatological lesion scores.

Results – Both drugs were well tolerated and clinically effective. After 14 and 28 days of treatment, the respec-

Flystrike

- Easy to miss
- Severe cases PTS
- Physical removal under GA
- Rearguard or F10 insecticide spray
- Ivermectin
- Antibiotics/Meloxicam (0.5mg/kg)

Foxes

Reasons for Admission

- RTA
- Disease (mange/lepto)
- Abnormal behaviour
- Lame
- Orphans
- Trapped
- Entangled

Reasons for Euthanasia

- Leptospirosis
- Missing canine teeth
- Severe mange
- Eyes closed juveniles
- Tame/imprinted
- Blind
- Exposed viscera
- Missing limbs or eye
- >4 weeks needed in care (destructive/self trauma)
- Emaciated

RSPCA

First Aid/Stabilisation

- Warmth
- Quiet/dark
- Fluids – i/v or s/c
- Pain relief

Examination

- History important – presenting problem
- Muzzle/towel
- Trot down corridor – assess gait, awareness, sight
- Mm colour/teeth
- Weight/BCS – weigh in basket, then weigh basket
- Skin/wounds
- Fractures
- Sedate for x-ray/wound assessment

Mange

- Immunity
- Increase spread in close urban environments
- Secondary infections
- Emaciated/debilitated
- Underlying disease
- Zoonotic
- Long term treatment

Wounds

- Think about time scale and handling needed
- Minimum clipping
- Thorough cleaning
- Simple suturing
- Sedation to re-assess
- Antibiotics/pain relief
- Self trauma

Orphans

- Often left by vixen for extended periods from 4 weeks old
- If healthy can be returned within 24-48 hours
- Isolate for few days before mixing
- Must rear as a group – imprint
- Limited numbers/release sites – strict triage

Conclusion

- Weights
- History
- Initial stabilisation before full examination
- Give fluids, warmth, pain relief
- What you can do vs what you should do – welfare
- Must be able to compete with wild counterparts
- May need sedation to examine properly
- Radiographs