Geriatric Care of Primates

Wm. Kirk Suedmeyer, DVM, Dipl. ACZM

Kansas City Zoo
Introduction

• Geriatric care is a relatively new focus of animal welfare in captive care of exotic animals including primates
  – Longstanding cornerstone of veterinary care in domestic animals
Introduction

• Captive animals living longer
  - Shift in societal conscience
  - 80% of zoo animals live longer than wild counterparts
    – University of Lyon, University of Zurich 2016 (Sci Rep)
  - Difficult to define “geriatric”
    – Wild vs Captive animal longevity

Kansas City Zoo
Introduction

• Geriatric person
  – Middle age
    • A person 45-61 years of age
    • Life expectancy 71 years
  – A person who is past middle age
    • >61 and under health care
  – An animal that is past middle age
    • Chimpanzee >45 (50-55)
    • Polar bear >25 (30)
    • Elephant >40 (50)
Introduction

• Geriatric Care
  – Goal
    • Management factors to consider
      – Breeding status
Introduction

• Geriatric Care
  – Goal
    • Management factors to consider
      – Breeding status
      – Social status
Introduction

• Geriatric Care
  – Goal
    • Management factors to consider
      – Breeding status
      – Social status
      – Exhibit status (zoos)
Introduction

• Geriatric Care
  – Goal
  • Management factors to consider
    – Breeding status
    – Social status
    – Exhibit status
    – Medical status
Introduction

• Geriatric Care
  – Goal
    • Management factors to consider
      – Animal welfare/Quality of life
Introduction

• Geriatric Care
  – Goal
    • Quality of Life
      – Pain management
Introduction

• Geriatric Care
  – Goal
    • Quality of Life
      – Pain management
      – Weight and body condition
Introduction

• Geriatric Care
  – Goal
    • Quality of Life
      – Pain management
      – Weight and body condition
      – Hygiene
      – Behavior and Social needs/status
Introduction

• Geriatric Care
  – Goal
    • Quality of Life
      – Pain management
      – Weight and body condition
      – Hygiene
      – Behavior and Social needs/status
      – Mobility
Introduction

• Geriatric Care
  – Goal
    • Quality of Life
      – Pain management
      – Weight and body condition
      – Hygiene
      – Behavior and Social needs/status
      – Mobility
Introduction

• Geriatric Care
  – Goal
  • Quality of Life
    – Pain management
    – Weight and body condition
    – Hygiene
    – Behavior and Social needs/status
    – Mobility
    – Medical condition
Introduction

• Geriatric Care
  – Goal
    • Quality of Life
      – Pain management
      – Weight and body condition
      – Hygiene
      – Behavior and Social needs/status
      – Mobility
      – Medical condition
      – More good days than bad
Introduction

• Geriatric Care
  – Goal
    • Quality of Life
      – Pain management
      – Weight and body condition
      – Hygiene
      – Behavior and Social needs/status
      – Mobility
      – Medical condition
      – More good days than bad
Quality of Life Plan

Animal:

History:

Pain Management

Are any of the following parameters present: ............ Y or N
- Diagnosis of an illness or injury that is deemed life threatening and no treatment options are available/feasible.
- Maxed out on pain meds and still appears painful - describe what that would look like for this animal. Example: vocalizing in pain, shaking, laying down excessively, holding/propping herself up when standing or sitting, limited mobility, etc.
- Chronic pain/urination or defecation - describe what that would look like for this animal. Example: straining, shaking, vocalizing in pain.

Mobility

Are any of the following parameters present: ....................... Y or N
- Inability to shift for more than ______
- Struggling to get over shift stoops and in/out steps despite modifications
- Stumbling, ataxic, or weak in the back legs that does not resolve with medications for ______
- Unable to navigate environment due to vision loss - unable to find food and/or water
- Unresponsive or unable to get up for ______ despite extreme efforts to get her to move physically trying to move/poke, loud noises, etc.
- Unable to navigate environment to find shelter and bedding
- Unable to find keepers at mesh to take food/meds as necessary
- Unable to defend self

Weight and Body Condition

Are any of the following parameters present: ....................... Y or N
- Losing weight even though maintaining a normal appetite for ______ months in a row
- Cannot go below ______ pounds
- Will weigh weekly if goes below ______ pounds
- Loses appetite - does not eat anything for more than ______ despite being offered high value items
- Body condition score of ______

Hygiene

Are any of the following parameters present: ....................... Y or N
- Fecal soiled back legs and no attempt to clean them or be groomed
- Laying in feces or urine
- Urine burn on back legs

Behavior/Social Needs

Are any of the following parameters present: ....................... Y or N
- Appears to be "normal" - describe what that looks like for this animal. Example: social with other baboons, some interaction with keepers, eye flashes or displays if threatened
- Are social/psychological needs met? - describe what that looks like for this animal. Example: grooms others and is groomed by others, interacts with other baboons, explores enrichment appropriately

*Please keep in mind these are just guidelines and may need to be reevaluated and/or changed if deemed necessary by management and/or veterinary staff. Open communication between keepers and management is necessary to ensure all information is available so an informed decision can be made.

*It should be noted that the veterinary staff may deem euthanasia necessary at some point before the staff feels that any of these specific criteria are met. It should be known that, although it is extremely important for the animal staff to be involved with monitoring the health of the animals, the ultimate decision in these matters lies with the veterinarians.

Rev 10/2016
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
      – Health assessment
        » Safe
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
      – Health assessment
        » Dental evaluation
Geriatric Management

• Geriatric Care
  – Management
  • Case evaluation
    – Health assessment
      » Dental assessment

Kansas City Zoo
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
      – Evaluation of organ function
        » Ultrasound
        » Laboratory evaluation
        » Colonoscopy
        » Gastroscopy
        » CT/MRI
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
      – Health assessment

Kansas City Zoo
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
      – Health assessment
        » Mona monkey
Geriatric Management
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
      – Health assessment
        » Gorilla

Kansas City Zoo
Geriatric Management

- Geriatric Care
  - Management
  - Case evaluation
    - Health assessment
      » Orangutan
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
      – Health assessment
        » Ophthalmic exam
        » Eye pressures

Kansas City Zoo
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
      – Health assessment
        » Body condition-
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
    • Therapeutic approach
      – Nutrition
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
    • Therapeutic approach
      – Nutrition
      – Analgesics/anti-inflammatories
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
    • Therapeutic approach
      – Nutrition
      – Analgesics/anti-inflammatories
      – Chondroprotectants
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
    • Therapeutic approach
      – Nutrition
      – Analgesics/anti-inflammatories
      – Social interaction/status
Geriatric Management

- Geriatric Care
  - Management
    - Case evaluation
    - Therapeutic approach
      - Nutrition
      - Analgesics/anti-inflammatory agents
      - Social interaction/status
        » Single primate
        » Additional enrichment
        » Anxiolytics?
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
    • Therapeutic approach
      – Nutrition
      – Analgesics/anti-inflammatories
      – Social interaction/status
        » Single primate
        » Additional enrichment
        » Anxiolytics?

Kansas City Zoo
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
    • Therapeutic approach
      – Nutrition
      – Analgesics/anti-inflammatories
      – Social interaction/status
      – Medical treatment
        » Dependent on condition
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
    • Therapeutic approach
      – Nutrition
      – Analgesics/anti-inflammatory
      – Social interaction/status
      – Medical treatment
      – Change in husbandry
Geriatric Management

• Geriatric Care
  – Management
    • Case evaluation
    • Therapeutic approach
      – Nutrition
      – Analgesics/anti-inflammatory
      – Social interaction/status
      – Medical treatment
      – Change in husbandry
Geriatric management

• Geriatric Care
  – Management
    • Case evaluation
    • Therapeutic approach
      – Nutrition
      – Analgesics/anti-inflammatory agents
      – Social interaction/status
      – Medical treatment
      – Change in husbandry
  • Euthanasia
    – Complex culmination in quality of life decline

Kansas City Zoo
Geriatric management

- Geriatric Care
  - Management
    - Case evaluation
    - Therapeutic approach
      - Nutrition
      - Analgesics/anti-inflammatories
      - Social interaction/status
      - Medical treatment
      - Change in husbandry
  - Euthanasia
    - Necropsy used to learn and help future management of geriatric animals

Kansas City Zoo
Discussion

• Geriatric care is a rapidly expanding field of exotic animal medicine
• Many of the preventative and therapeutic modalities can be used in geriatric primate care
• It is essential to initiate a Quality of Life plan for every geriatric animal
Conclusion

• Every animal, regardless of its perceived value or cost of care deserves appropriate geriatric management and support.
The End

Kansas City Zoo