

The Perfect Pump: Wearable Pumps for Pain control...



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PeakVets.com

This is the story of Paxton

- 5 yr old, MN Mountain Pug



Owner arrived home... then to the vet



RxActuator Mini-Infuser™ pump Wearable Drug Delivery

Better Therapy - Lower Cost – Happier Humans
Acute Pain, Chronic Pain, Hospice, Antibiotics
Happier Dogs



Hydromorphone
0.1 mg/kg IV followed by continuous SQ



RX Actuator Pump

- 48 hr continuous infusion
- Fixed rate – 0.2 ml/hr
- 10 ml reservoir
- No batteries
- No human interaction / diversion!





0.2 mL/hr Flow Rate, 48 hours
10mL onboard

10mg/mL HYDROMORPHONE CRI
Rx Therapy 0.01 mg/Kg/hr



Rx Actuator

HYDROMORPHONE 10mg/mL

CASE # _____

Pt Name _____

Pump SN# _____

WEIGHT (Kg) _____

0.2 mL/hr Flow Rate, 48 hours
10mL onboard

10mg/mL HYDROMORPHONE CRI Table
Rx Therapy 0.01 mg/Kg/hr

Canine weight
(Kg)

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75

80

85

90

95

100

Canine weight
(Kg)

5

10

15

20

25

4.8

5.0

5.3

5.0

Hydromorphone
drug load (mL)

0.3

0.5

0.8

1.0

1.3

Diluent
Saline/Sterile
Water (mL)

9.8

9.5

9.3

9.0

8.8

Provided by RxActuator, Inc. for exclusive use with the Mini-Infuser™ Fixed Rate Pump by or under the direction of a Licensed Veterinarian. For animal use only.





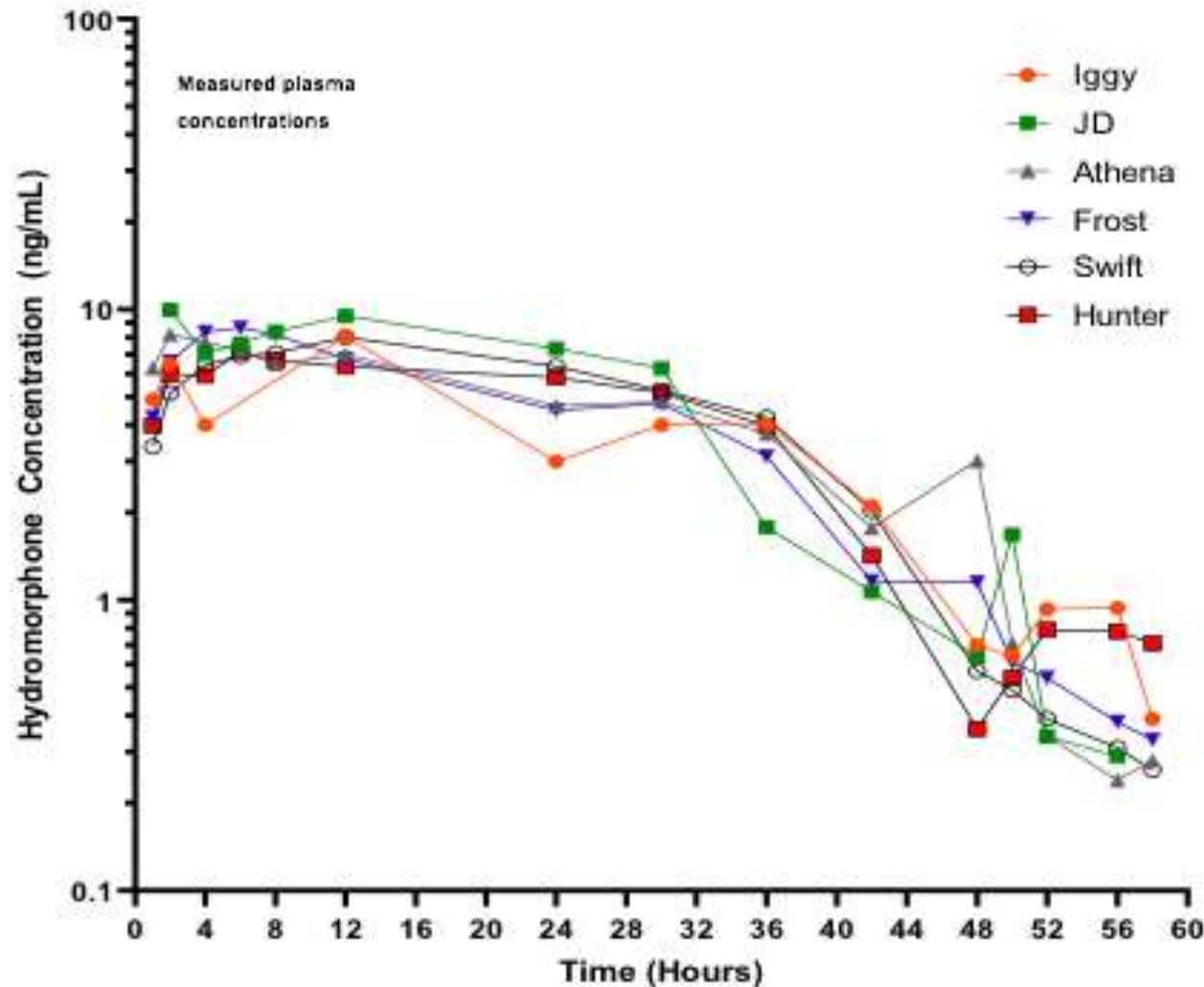
Pharmokinetics of Hydromorphone

by Dr. Kristen Messenger,

Assistant Professor of Pharmacology, NCSU

Diplomate, American College of Veterinary Anesthesia and Analgesia

Hydromorphone in Dogs Following a 48 hour Subcutaneous Infusion using the RxActuator Mini-Infuser●Wearable Pump



Hydromorphone dosage
– 0.01mg/kg/hr

Subcutaneous

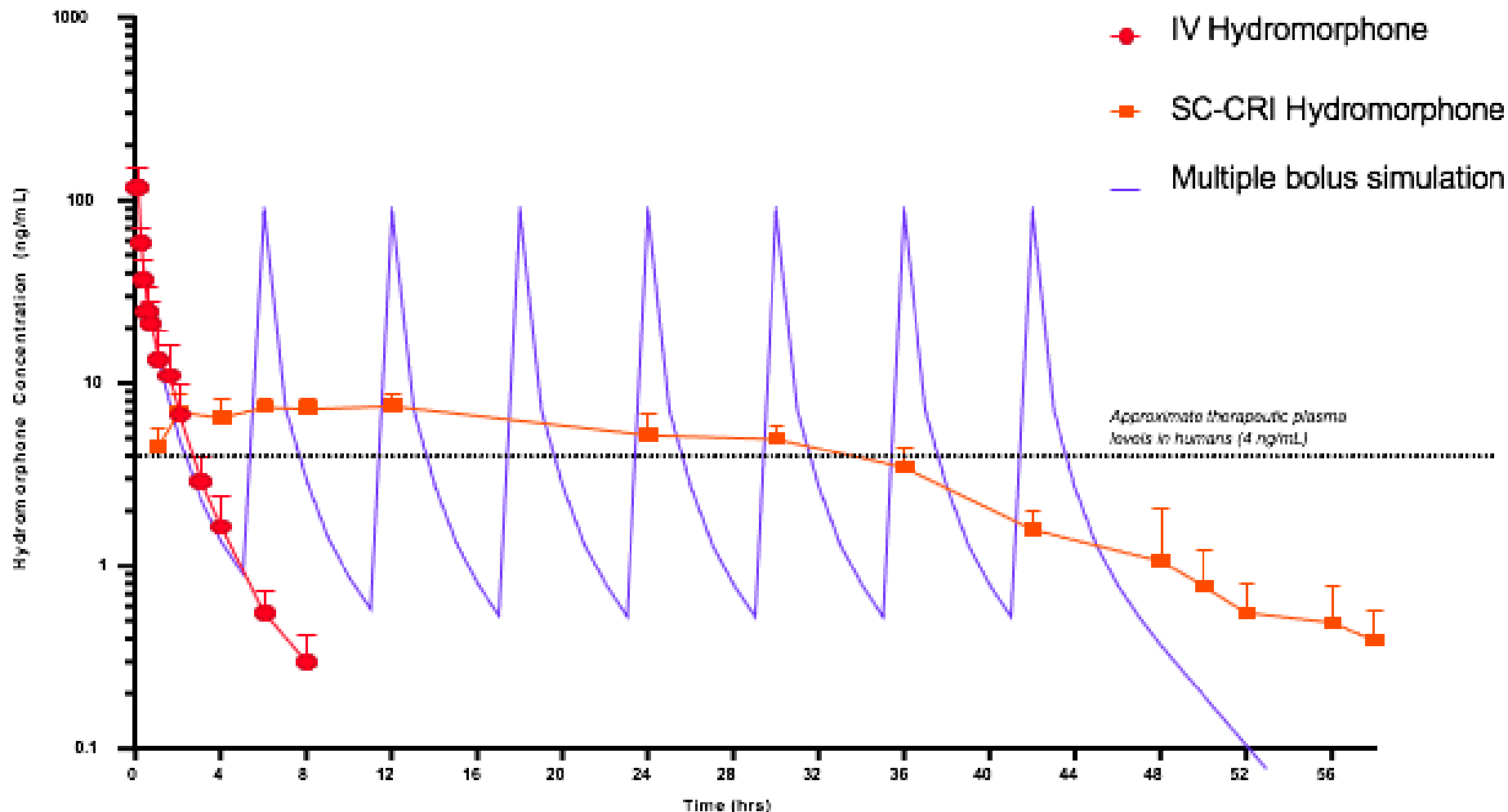
Wearable Pump – no IV
tether

Dr. Kristen Messenger, NCSU

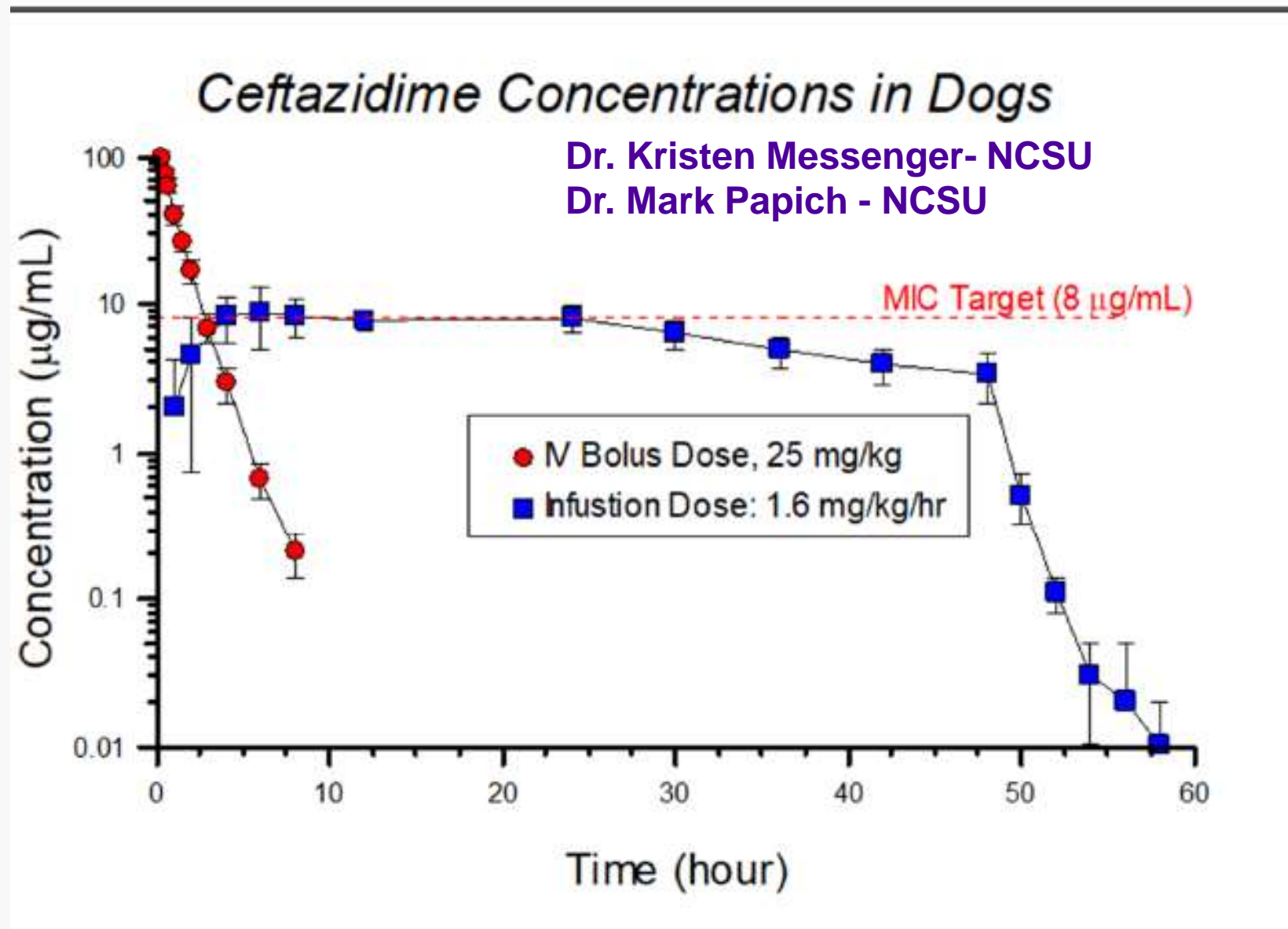
“, it is very impressive that
the pump does deliver drug
subcutaneously very
reliably”

SC Infusion 0.01 mg/kg/hr of HydroMorphone using the Mini-Infuser™ Wearable pump

Compared with IV Hydromorphone Bolus, and simulated multiple Bolus injections
Dr. Kristen Messenger, NCSU



Pharmacokinetics of the Antibiotic Ceftazidime in Dogs Administered with the RxActuator Mini-Infuser™ Infusion pump.



Interesting Hydromorphone Effects

- Lower effective dose than IV
- No vomiting
- Minimal sedation



Angus 4 yr old FS - Laparotomy





Medical Pet Shirt™ to hold Pump



RX Actuator Pump Advantages

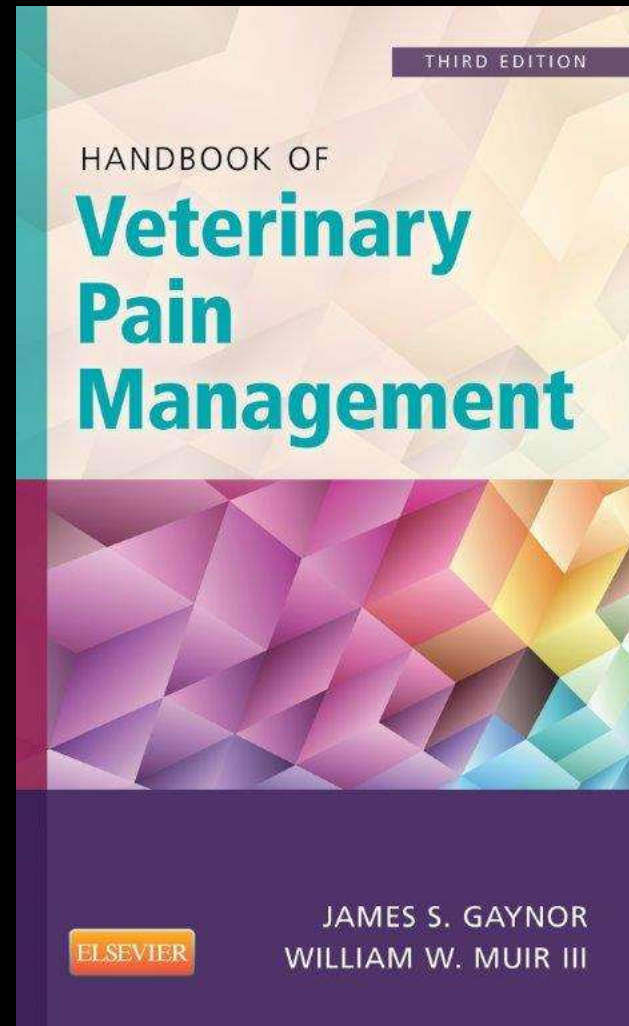
- ✓ Provides improved therapeutic pain management-outpatient or inpatient
- ✓ Increased canine comfort while reducing staff workload
- ✓ Patients can go home!
- ✓ Reduced side effects compared to IV



For Consultation



970-233-0795
www.PeakVets.com



Further Information