

SEDATION OF HORSES WITH DETOMIDINE IN RELATION TO BODY SURFACE AREA



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THE AIM

To evaluate administration of detomidine in relation to body surface area (SA) in veterinary practice within clinical and field conditions. Body weight (BW) was used as control.

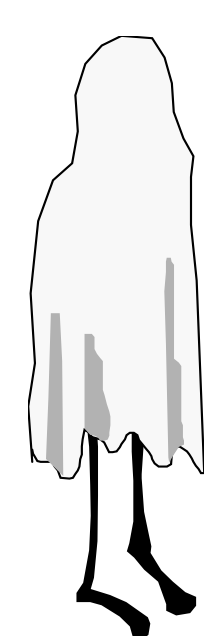
MATERIAL AND METHODS

THE DOSE

The set-dose was calculated at 100 kg/m² (based on the assumption that a 500 kg horse has a surface area of 5 m²).

The dose depended on procedure:

- a) mouth: BW: 12 µg/kg or SA: 1.2 mg/m².
- b) skin/leg: BW: 16 µg/kg or SA: 1.6 mg/m².
- c) wound/head: BW: 20 µg/kg or SA: 2.0 mg/m².

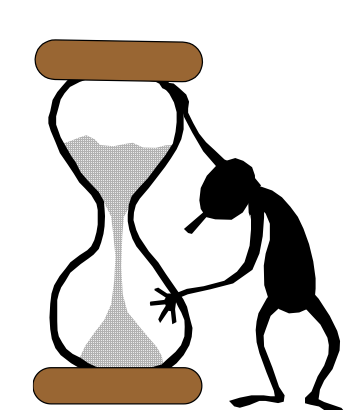


EVALUATION

The practitioner was blinded to administration according to SA or BW.

The practitioner evaluated on a continuous scale:

- depth of sedation at five minutes after sedation (no sedation 0 – excellent 10)
- carrying through of the procedure (not possible without additional sedation/analgesia 0 – excellent 10)

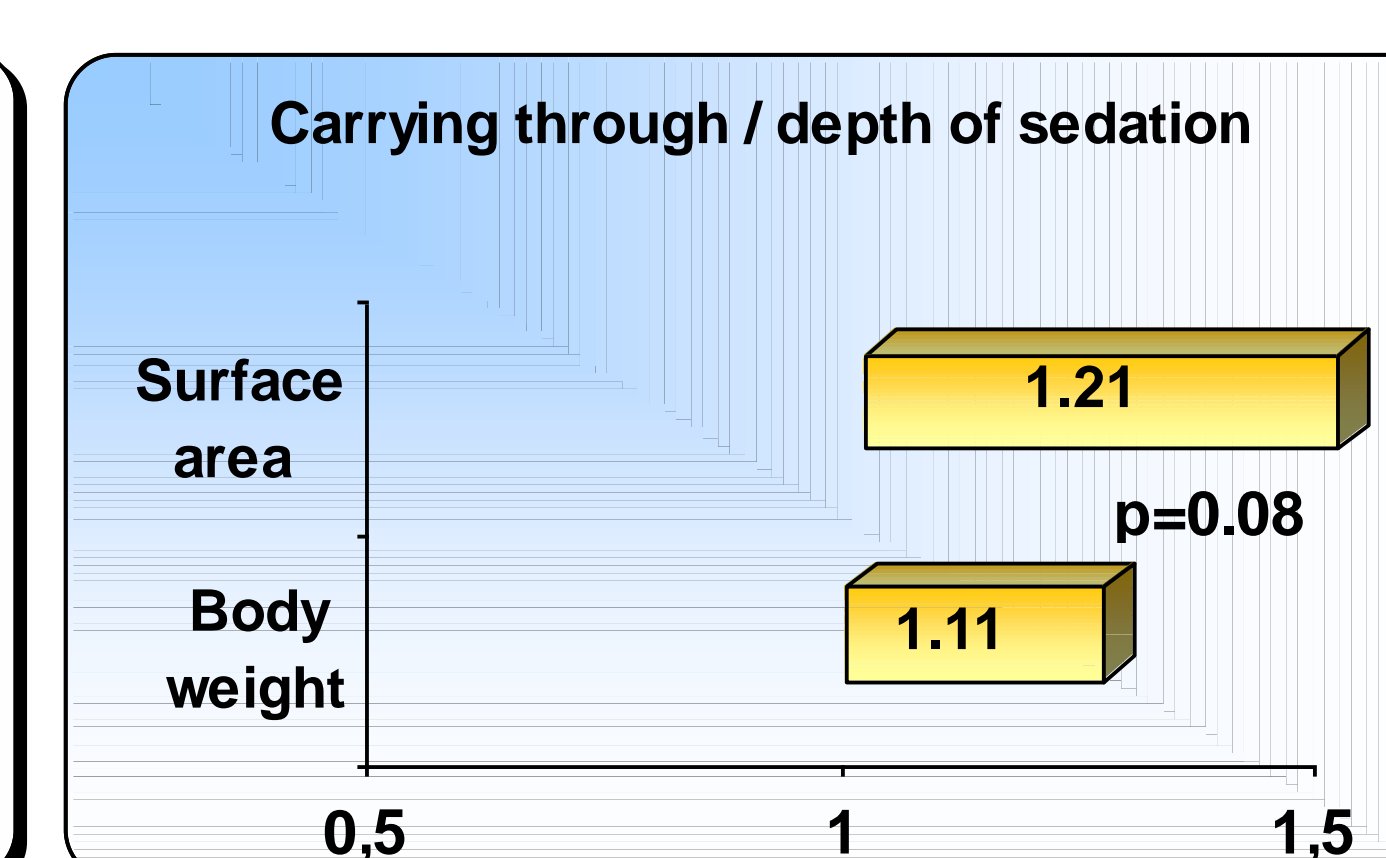
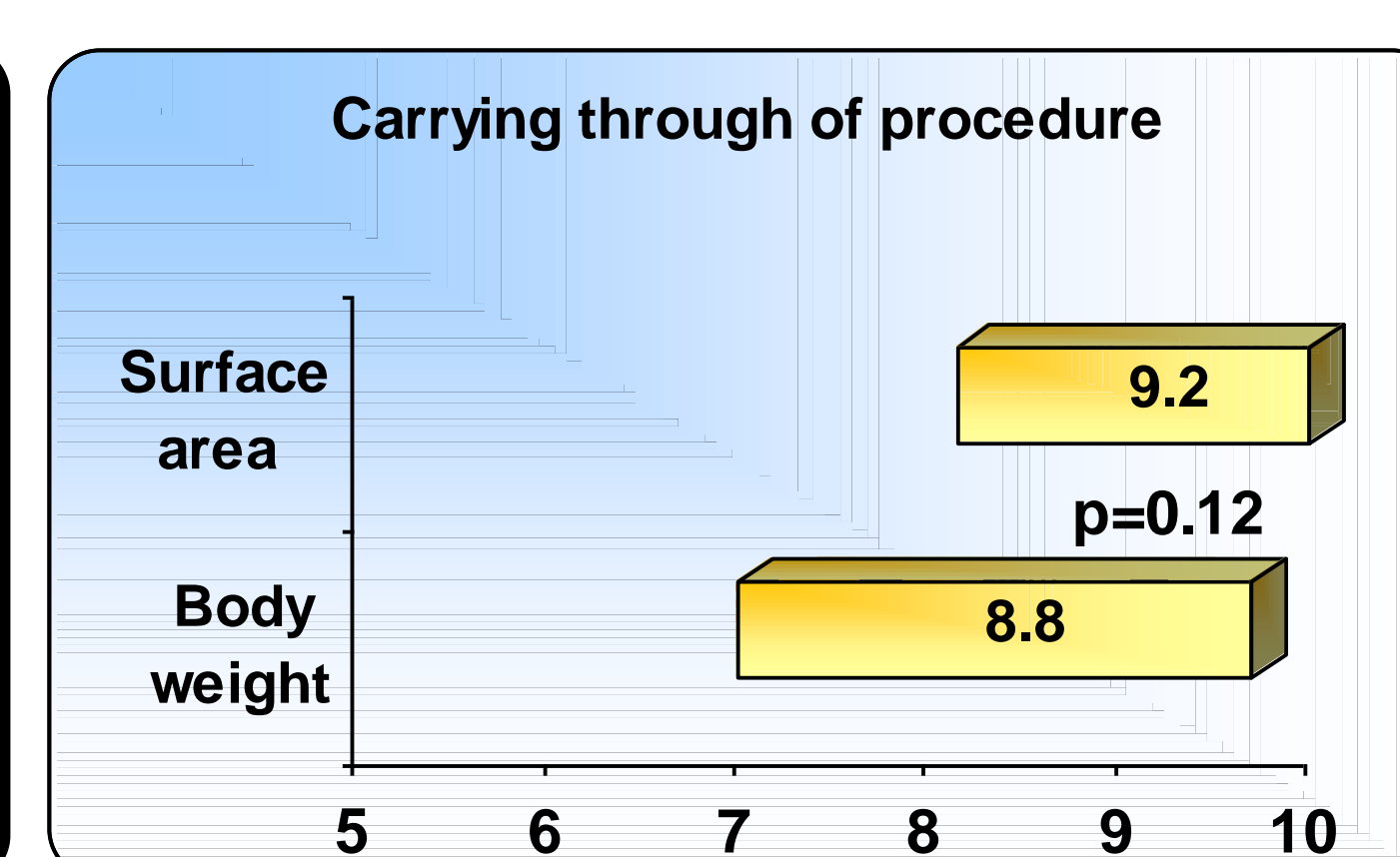
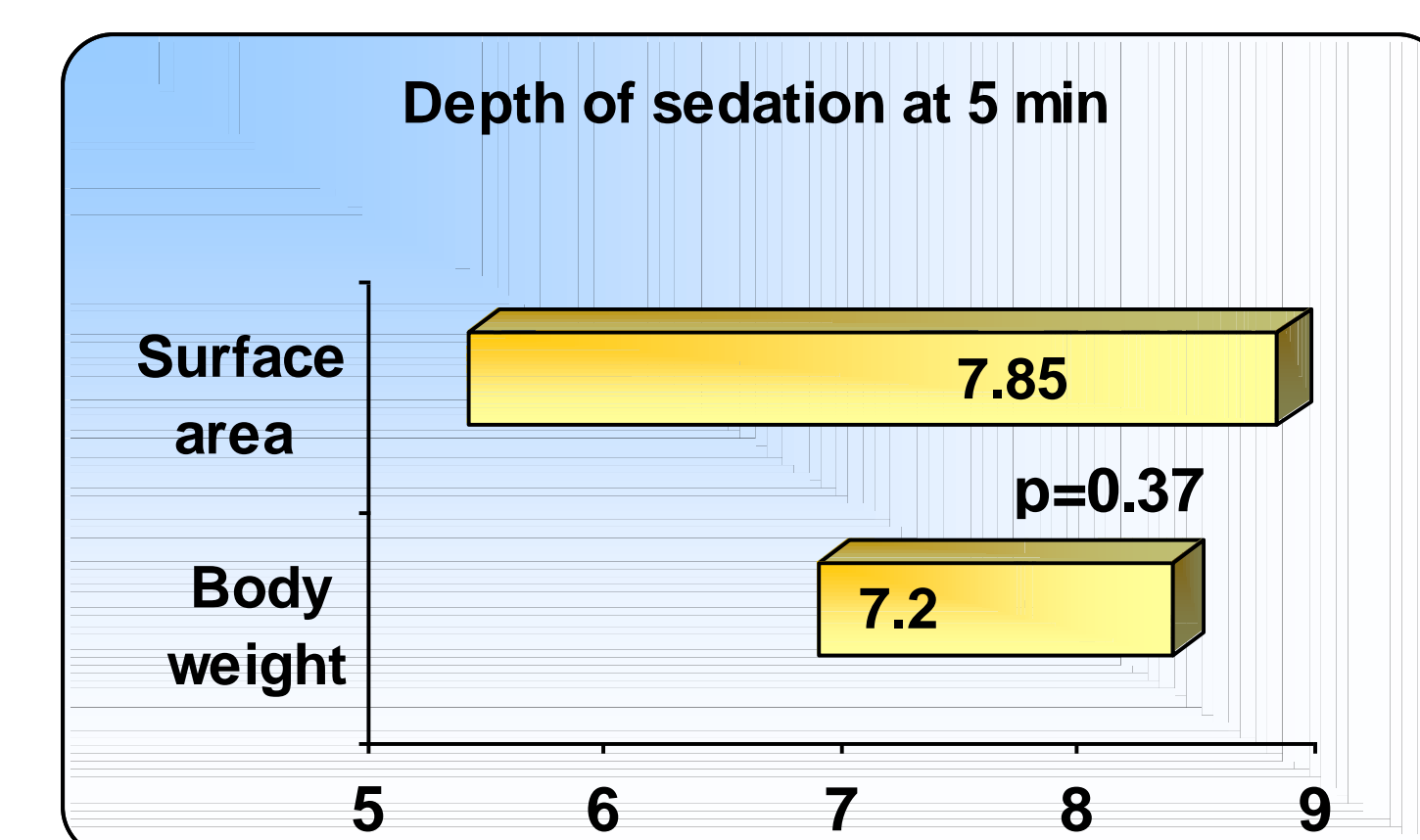
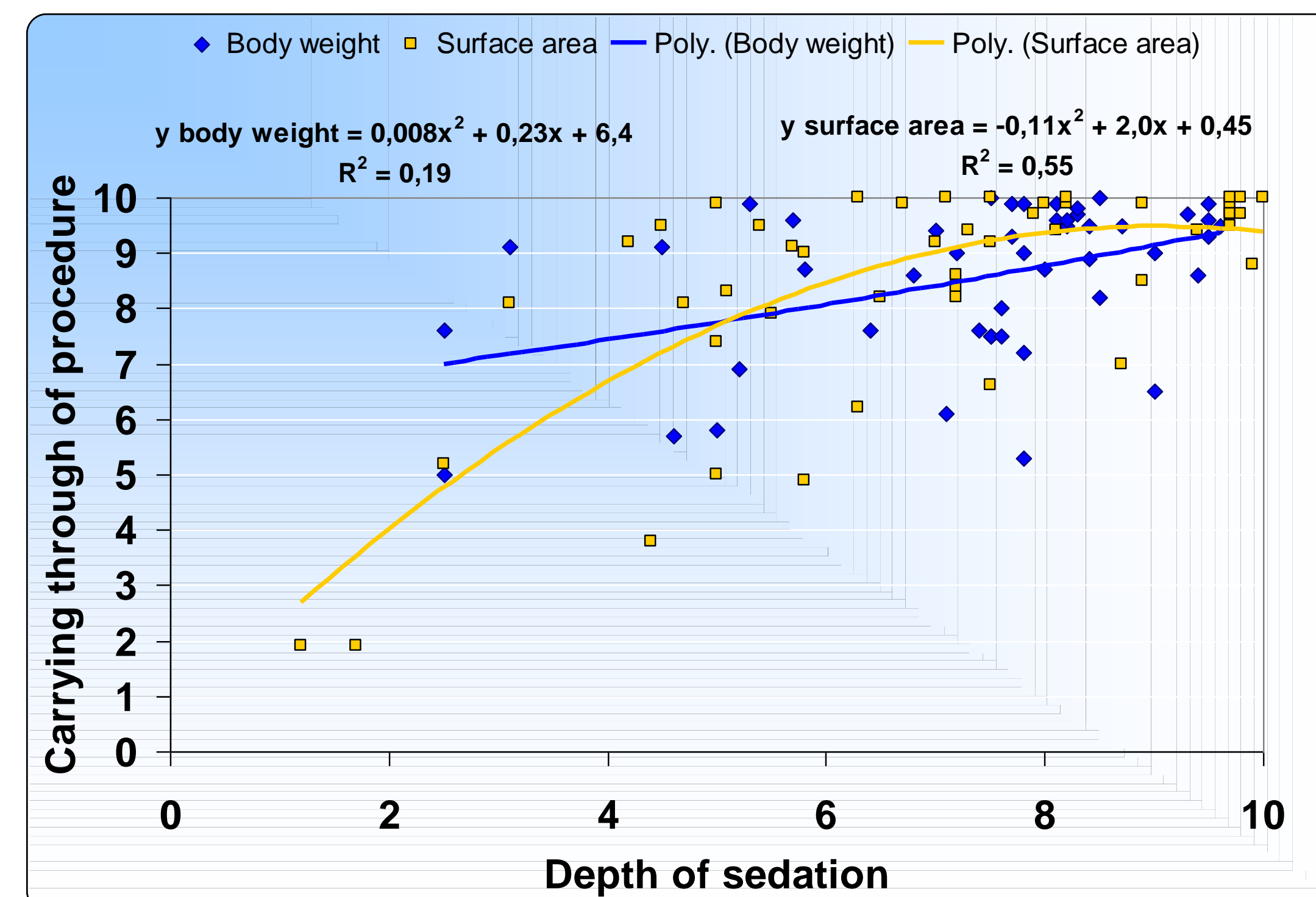
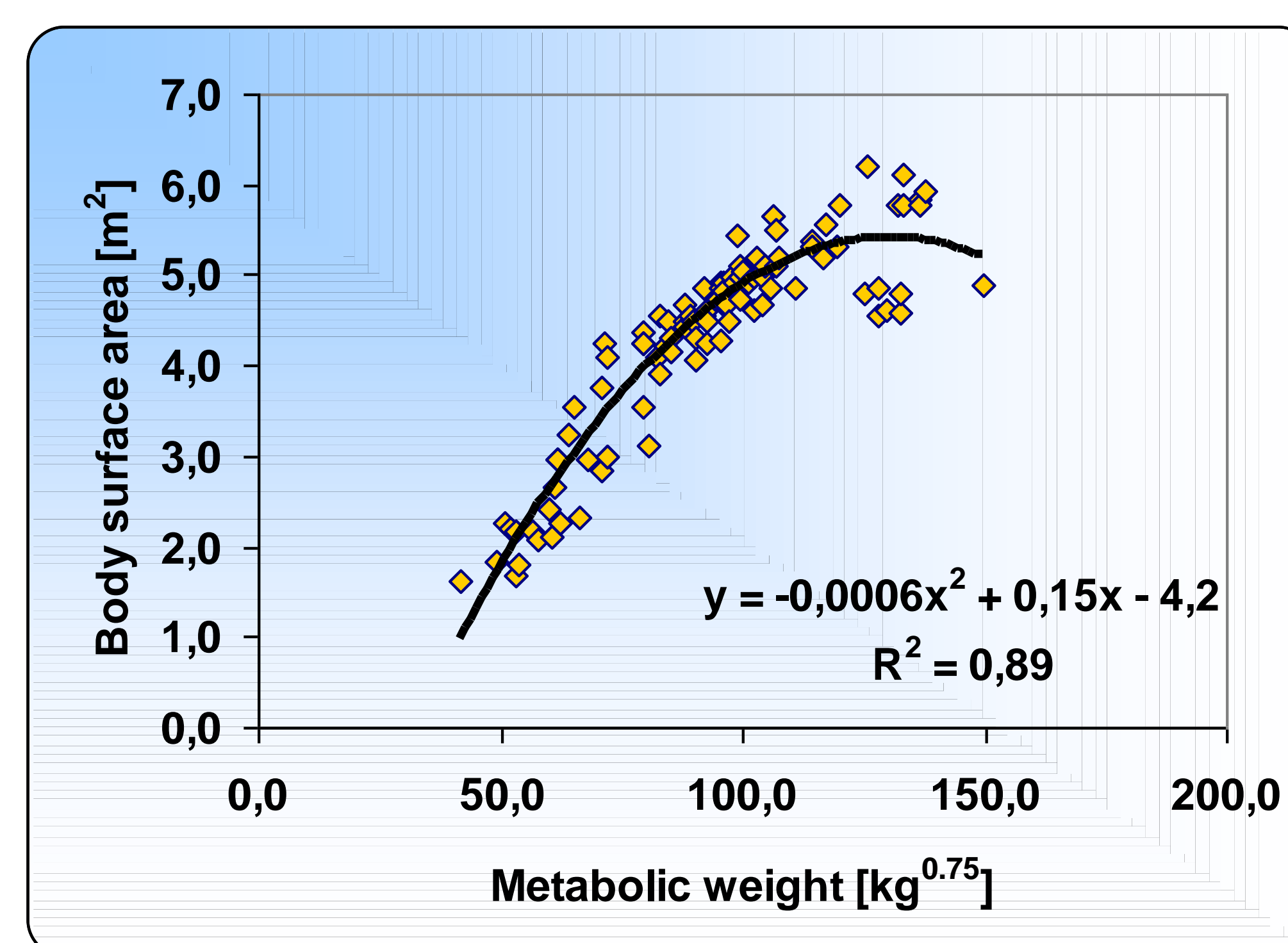


STATISTICAL ANALYSES

The results were statistical analysed with non-parametric Mann-Whitney Rank Sum Test.

RESULTS

Results presented as median ± 25%. There were no statistical difference between the groups.



SURFACE AREA
 $SA=2H^2$ where
 - SA is the body surface area SA (m²),
 - H is the height of the withers (m).
 0.9 m → 1.6 m², 1.1 m → 2.4 m², 1.3 m → 2.9 m²,
 1.45 m → 4.2 m², 1.55 m → 4.8 m², 1.65 m → 5.4 m².



CONCLUSION

- Administration of detomidine in relation to body surface area based on the height of the withers is a practicable concept to sedate horses in veterinary practice.
- It's Safe, Simple and Similar!



5.0 m²



3 * 1.7 m²



103 HORSES

The horses (≥ one year) from four clinics and field practice were randomised into a group:

Parameter	Body weight group	Surface area group
Horses & ponies	31 H & 23 P	31 H & 18 P
Age	2 – 19 years	1 – 18 years
Body weight	181 – 710 kg	144 – 793 kg
Surface area	1.8 – 6.2 m ²	1.6 – 6.1 m ²
Body weight / area	73 – 142 kg/m ²	70 – 162 kg/m ²
Metabolic weight	49 – 138 kg ^{0.75}	42 – 149 kg ^{0.75}



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