

*Brief communication*SELENIUM CONTENT IN WHOLE BLOOD AND  
MUSCULATURE IN CONJUNCTION WITH PARTURIENT  
PARESIS AND THE DOWNER SYNDROME IN COWS

Waxy muscle degeneration has been suspected to be one of the causes of the impaired effect of treatment of parturient paresis noted in Sweden in the last decades (*Hallgren 1955, Nordström 1965*). For this reason a study was made of the selenium content in the blood of 13 cows with puerperal paresis and in macroscopically normal *M. gracilis* of 25 cows emergency-slaughtered owing to downer condition. All downers had widespread muscular injuries, probably of traumatic origin. Blood from 13 non-parturient cows in the same herds and *M. gracilis* from 23 normally slaughtered cows served as comparative material. The selenium analyses were made by the method of *Lindberg (1968)*.

## RESULTS AND DISCUSSION

The average selenium content in blood was roughly the same in cows with parturient paresis as in non-parturient cows from

Table 1. Selenium content (ng/ml) in whole blood from cows with parturient paresis and from normal non-parturient cows in the same herds.

	Parturient paresis	Controls
	62	43
	29	21
	126	86
	20	17
	30	21
	27	37
	37	49
	17	19
	125	132
	48	48
	44	46
	27	37
	39	38
$\bar{x}$	48.5	45.7
s	36.6	31.7
t-value	< 1	

the same herds. The close agreement between the two cows in the same herd and the great variation between the herds should be noted (Table 1). The highest value was about seven times greater than the lowest.

The same large variation was found in musculature both from cows with downer syndrome and from normally slaughtered cows. No statistically significant difference in selenium content existed between these two groups (Table 2).

Table 2. Selenium content (p.p.m.) in *M. gracilis* from downers with muscular injuries and from normally slaughtered non-parturient cows.

	Downer cows n = 25	Normal cows n = 23
$\bar{x}$	0.29	0.34
s	0.13	0.14
R	0.06—0.50	0.10—0.58
t-value	1.39	

It may be concluded that these studies do not support the assumption of waxy muscle degeneration being the cause of the impaired effect of treatment of parturient paresis. Nor would the selenium content in the musculature appear to have any connection with the muscular injuries often observed in the downer syndrome (*Jönsson & Pehrson*, to be published).

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#### REFERENCES

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