

Widespread neonatal infection with phocid herpesvirus 1 in free-ranging and stranded grey seals *Halichoerus grypus*

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Diseases of Aquatic Organisms 133: 181–187 (2019)

Table S1. Categorical risk factors, using univariate analysis, for detecting phocid herpesvirus 1 from nasal swabs of grey seals. n: group size; OR: odds ratio; 95% CI: 95% confidence interval; Sig.: Statistical significance of results (NS: non-significant; *p < 0.05; **p < 0.01; ***p < 0.001)

Risk factor	Group	n	n (%) positive	OR	95% CI	p	Sig.
All seals							
Group	Free-ranging – Live	90	52 (57.8%)	1.00			
	Free-ranging – Dead	50	27 (56.2%)	0.94	0.46, 1.91	0.863	NS
	Stranded – Live	31	18 (62.1%)	1.20	0.51, 2.82	0.683	NS
	Stranded – Died/ethanised	9	8 (88.9%)	5.85	0.7, 48.73	0.103	NS
	Live free-ranging yearlings	19	5 (27.8%)	0.28	0.06, 0.86	0.025	*
Free-ranging live and dead pups							
Live/dead	Dead	50	27 (56.2%)	1.00			
	Live	90	52 (57.8%)	1.06	0.52, 2.16	0.863	NS
Sex	Female	65	34 (52.3%)	1			
	Male	72	45 (62.5%)	1.52	0.77, 3	0.228	NS
Mass range (kg)	<12	13	5 (38.5%)	1			
	12–25	73	31 (42.5%)	1.18	0.35, 3.96	0.787	NS
	25–31	13	11 (84.6%)	8.8	1.35, 57.43	0.02	*
	>31	39	39 (28.3%)	7.31	1.83, 29.2	0.004	**
Free-ranging live pups only							
Time point	Early	30	11 (36.7%)	1.00			
	Mid	30	20 (66.7%)	3.45	1.19, 9.99	0.022	*
	Late	30	21 (70%)	4.00	1.37, 11.84	0.011	*
Sampling site	Tidal boulder beach	30	22 (73.3%)	1.00			
	Rocky pools	30	18 (60%)	0.55	0.18, 1.62	0.276	NS
	Muddy grassy slope	30	12 (40%)	0.24	0.08, 0.72	0.011	*
Coat	Stage II	41	16 (39%)	1.00			
	Stage III	13	9 (69.2%)	3.52	0.93, 13.35	0.065	NS
	Stage IV – Moulting	27	21 (77.8%)	5.47	1.81, 16.48	0.003	**
	Stage V – Adult coat	9	6 (66.7%)	3.12	0.68, 14.31	0.142	NS

Table S2. Multivariate logistic regression analysis for PhHV-1 PCR of nasal swabs in live free-ranging grey seal pups. SE: Standard error of coefficient; OR: odds ratio; 95% CI: 95% confidence interval of OR

Variable		Coefficient	SE	Odds ratio (OR)	95% CI	p
Intercept		-2.89	0.92	-	-	-
Mass	Mass in kg	0.17	0.017	1.15	1.08, 1.22	<0.001
Site	Tidal boulder beach	-	-	1	-	-
	Rocky pools	-1.75	0.72	0.55	0.18, 1.62	0.015
	Muddy grassy slope	-2.22	0.71	0.24	0.08, 0.72	0.002

Table S3. Multivariate logistic regression analysis for PhHV-1 PCR of nasal swabs in live free-ranging and stranded grey seal pups. SE: Standard error of coefficient; OR: odds ratio; 95% CI: 95% confidence interval of OR

Variable		Coefficient	SE	Odds ratio (OR)	95% CI	p
Intercept		-3.107	0.797			
Mass	Mass in kg	0.128	0.03	1.09	1.04, 1.14	<0.001
Colony	Free-ranging pups	-	-	1	-	-
	Stranded pups	1.592	0.55	1.2	0.51, 2.82	0.003

Table S4. Odds ratio of finding lesions in pups with a positive PhHV-1 PCR status (either positive nasal swab or positive tissue pool for PhHV-1). OR: odds ratio; 95% CI: 95% confidence interval; Inf: Infinity; Sig.: Statistical significance of results (NS: non-significant; *p < 0.05; **p < 0.01; ***p < 0.001).

Lesion	PhHV-1 status	n (%) positive	OR	95% CI	p	Sig.
Adrenal necrosis	HV -	1 (5.9%)				
	HV +	7 (16.7%)	3.20	0.36, 28.23	0.29	NS
Hepatic necrosis	HV -	1 (5.9%)				
	HV +	20 (50%)	16.00	1.93, 132.39	0.01	*
Multifocal hepatitis	HV -	4 (23.5%)				
	HV +	16 (38.1%)	2.00	0.55, 7.21	0.289	NS
Thymic atrophy	HV -	4 (23.5%)				
	HV +	31 (81.6%)	14.39	3.59, 57.71	<0.001	***
Buccal ulceration	HV -	1 (5.9%)				
	HV +	17 (40.5%)	10.88	1.32, 89.93	0.027	*
Tongue ulceration	HV -	3 (17.6%)				
	HV +	11 (26.2%)	1.66	0.4, 6.88	0.488	NS
Keratitis	HV -	0 (0%)				
	HV +	4 (9.5%)	33091159	0, Inf	0.995	NS
Uveitis	HV -	0 (0%)				
	HV +	5 (12.5%)	44909430	0, Inf	0.995	NS
Interstitial pneumonia	HV -	7 (41.2%)				
	HV +	22 (52.4%)	1.57	0.5, 4.91	0.437	NS