

**Supplementary Table 2.** Correlations between ADI and parameters in BI groups

Variable	Functional muscle		Muscle size	
	r	p-value	r	p-value
Right				
Trap	-0.068	0.554	0.125	0.271
SpCap	-0.135	0.231	-0.179	0.113
SpC	-0.157	0.18	-0.1	0.395
SSCap	-0.151	0.183	-0.26	0.021*
SSC	-0.181	0.136	-0.1	0.412
MS	-0.193	0.1	-0.166	0.159
LS	-0.115	0.319	-0.18	0.116
SCM	0.013	0.91	-0.17	0.133
LCap & LC	-0.143	0.206	-0.015	0.895
PDLM	-0.169	0.134	-0.35	0.001*
Left				
Trap	0.063	0.581	0.031	0.787
SpCap	0.039	0.734	-0.076	0.503
SpC	-0.079	0.502	-0.112	0.34
SSCap	-0.056	0.626	-0.245	0.030*
SSC	-0.076	0.535	-0.106	0.388
MS	-0.182	0.12	-0.156	0.184
LS	0.003	0.981	-0.184	0.107
SCM	0.025	0.825	-0.115	0.315
LCap & LC	-0.144	0.203	-0.049	0.664
PDLM	-0.046	0.685	-0.32	0.004*

BI, basilar invagination; ADI, atlantodental interval; r, Pearson correlation; Trap, trapezius; SpCap, splenius capitis; SpC, splenius cervicis; SSCap, semispinalis capitis; SSC, semispinalis cervicis; MS, multifidus; LS, levator scapulae; SCM, sternocleidomastoid; LCap & LC, longus capitis and Longus colli; PDLM, posterior deep layer muscles. \* $p < 0.05$ , statistically significant differences.