

**Supplemental material 1:** Linear regression models using MSK impairment results as dependent variables and 10 predictors: age, presence of neck pain, gender, BMI, use of preventive pharmacological therapy, and use of symptomatic drugs in the 24 hours before the evaluation were first included in the models as covariate then four dummy variables (controls against EM patients in each phase) were included

	Control (n= 52)	EM interictal (n= 46)	EM preictal (n=44)	EM ictal (n=37)	EM postictal (n=32)
<b>AROM total, mean ° (SD)</b>	359.7(42.2)	334.7(50.2); B=-18 p=0.040	328.4(56.3) B=-17 p=0.076	319.6(47.6) <b>B=-32 p=0.002*</b>	333.0(51.6) B=-24 p=0.023
<b>Flexion, mean ° (SD) ‡</b>	62.6(9.5)	56.3(12.0) B=-0.3 p=0.055	54.8(13.6) B=-0.3 p=0.088	53.1(11.5) <b>B=-0.5p=0.005*</b>	54.8(11.8) B=-0.4 p=0.018
<b>Extension, mean ° (SD)</b>	73.3(15.9)	65.2(13.3) B=-6 p=0.033	64.7(15.7) B=-5 p=0.112	61.8(13.8) <b>B=-10 p=0.004*</b>	66.5(16.5) B=-5 p=0.112
<b>Right lateral flexion, mean ° (SD) ‡</b>	39.7(9.5)	37.9(8.3) B=-0.1 p=0.548	38.2(11.3) B=-0.03 p=0.859	35.9(9.4) B=-0.3 p=0.124	37.5(11.7) B=-0.2 p=0.206
<b>Left lateral flexion, mean ° (SD)</b>	46.0(9.8)	41.5(11.2) B=-4 p=0.068	40.8(11.9) B=-3 p=0.147	40.8(11.1) B=-4 p=0.080	41.6(10.7) B=-4 p=0.077
<b>Right rotation, mean ° (SD) ‡</b>	68.6(8.8)	66.1(10.0) B=-0.2 p=0.422	63.9(14.1) B=-0.2 p=0.271	64.4(10.1) B=-0.3 p=0.222	65.0(10.5) B=-0.3 p=0.190
<b>Left rotation, mean ° (SD) ‡</b>	69.5(8.6)	67.8(10.4) B=-0.04 p=0.825	66.0(14.3) B=-0.1 p=0.735	63.6(11.6) B=-0.4 p=0.099	67.7(9.6) B=-0.1 p=0.580
<b>FRT, mean ° (SD)</b>	102.7(10.8)	86.5(20.0) <b>B=-17 p&lt;0.001*</b>	82.6(18.2) <b>B=-19 p&lt;0.001*</b>	82.2(18.5) <b>B=-20 p&lt;0.001*</b>	86.9(19.0) <b>B=-16 p&lt;0.001*</b>
<b>Right FRT, mean ° (SD)</b>	52.6(7.5)	44.7(11.2) <b>B=-9 p&lt;0.001*</b>	41.8(10.3) <b>B=-11 p&lt;0.001*</b>	42.6(11.0) <b>B=-10 p&lt;0.001*</b>	44.6(11.10) <b>B=-9 p&lt;0.001*</b>
<b>Left FRT, mean ° (SD)</b>	50.1(5.9)	41.9(10.9) <b>B=-8 p&lt;0.001*</b>	40.8(10.1) <b>B=-8 p&lt;0.001*</b>	39.6(10.0) <b>B=-10 p&lt;0.001*</b>	42.3(10.3) <b>B=-7 p=0.002*</b>
<b>APS, mean mmHg (SD)</b>	27.9(2.7)	23.3(3.6) <b>B=-5 p&lt;0.001*</b>	22.7(2.8) <b>B=-5 p&lt;0.001*</b>	22.8(3.0) <b>B=-5 p&lt;0.001*</b>	22.6(2.8) <b>B=-6 p&lt;0.001*</b>
<b>Total TrPs, mean number (SD)</b>	4.0(3.6)	7.2(3.3) <b>B=3 p&lt;0.001*</b>	8.2(3.5) <b>B=4 p&lt;0.001*</b>	8.8(3.3) <b>B=5 p&lt;0.001*</b>	7.9(3.7) <b>B=4 p&lt;0.001*</b>
<b>Total PAIMs, mean number (SD)</b>	0.9(1.5)	2.8(1.4) <b>B=2 p&lt;0.001*</b>	2.9(1.4) <b>B=2 p&lt;0.001*</b>	3.2(1.2) <b>B=2 p&lt;0.001*</b>	2.6(1.5) <b>B=1 p&lt;0.001*</b>
<b>PPT C1 total, mean kPa (SD) †</b>	546.3(266.0)	454.1(201.5) B=-0.1 p=0.278	448.6(174.5) B=-0.1 p=0.352	376.1(173.9) <b>B=-0.3 p=0.007*</b>	446.3(205.4) B=-0.1 p=0.247
<b>PPT C1 left, mean kPa (SD) †</b>	271.5(141.2)	219.5(92.5) B=-0.1 p=0.270	218.2(86.2) B=-0.1 p=0.305	183.4(79.2) <b>B=-0.3 p=0.011*</b>	227.6(102.5) B=-0.1 p=0.486
<b>PPT C1 right, mean kPa (SD) †</b>	274.9(130.3)	234.6(113.2) B=-0.1 p=0.336	230.4(95.7) B=-0.1 p=0.435	192.8(99.0) <b>B=-0.3 p=0.009*</b>	218.6(106.5) B=-0.2 p=0.136
<b>PPT C2 total, mean kPa (SD) †</b>	497.4(217.8)	416.1(208.3) B=-0.1 p=0.102	379.9(140.1) B=-0.2 p=0.025	340.8(156.0) <b>B=-0.3 p=0.002*</b>	379.3(129.1) B=-0.2 p=0.067
<b>PPT C2 left, mean kPa (SD) †</b>	246.5(106.3)	207.2(116.9) B=-0.1 p=0.121	182.5(74.4) B=-0.2 p=0.021	167.8(76.9) <b>B=-0.3 p=0.006*</b>	190.9(70.5) B=-0.2 p=0.146
<b>PPT C2 right, mean kPa (SD) †</b>	250.8(120.4)	209.0(97.7) B=-0.1 p=0.105	197.4(71.3) B=-0.2 p=0.049	173.0(82.4) <b>B=-0.3 p=0.002*</b>	188.4(63.4) B=-0.2 p=0.039
<b>PPT C4 total, mean kPa (SD) †</b>	505.4(217.8)	407.5(176.1) B=-0.2 p=0.058	404.4(166.7) B=-0.2 p=0.071	352.8(166.7) <b>B=-0.3 p=0.003*</b>	374.3(130.2) B=-0.2 p=0.030
<b>PPT C4 left, mean kPa (SD) †</b>	251.2(100.8)	200.0(88.3) B=-0.2 p=0.045	188.3(77.7) <b>B=-0.2 p=0.012*</b>	173.3(86.4) <b>B=-0.3 p=0.003*</b>	182.7(64.0) B=-0.2 p=0.031
<b>PPT C4 right, mean kPa (SD) †</b>	254.2(124.6)	207.5(91.1) B=-0.1 p=0.099	216.1(97.0) B=-0.1 p=0.255	179.5(78.1) <b>B=-0.3 p=0.006*</b>	191.6(72.3) B=-0.2 p=0.039
<b>PPT C6 total, mean kPa (SD) †</b>	715.8(36.2)	558.1(290.8) B=-0.2 p=0.062	567.4(267.4) B=-0.1 p=0.179	495.8(329.5) <b>B=-0.3 p=0.005*</b>	529.1(269.8) B=-0.2 p=0.037
<b>PPT C6 left, mean kPa (SD) †</b>	345.4(152.5)	265.6(134.3) B=-0.2 p=0.041	276.2(128.7) B=-0.1 p=0.190	252.9(167.9) B=-0.3 p=0.019	265.1(118.6) B=-0.2 p=0.117
<b>PPT C6 right, mean kPa (SD) †</b>	370.4(193.7)	292.5(163.1) B=-0.2 p=0.115	291.2(147.5) B=-0.1 p=0.194	243.0(159.0) <b>B=-0.3 p=0.003*</b>	264.1(158.6) B=-0.3 p=0.014

APS: activation pressure score; AROM: active range of movement, BMI: body mass index; EM: Episodic migraine; FRT: flexion rotation test; kPa: kilopascal; PAIMs: passive accessory intervertebral movements; PPT: pressure pain threshold; SD: standard deviation; TrPs: trigger points \*significant at p<0.013 vs. Control; †= data were log-transformed for statistical analysis; ‡ data were square-root transformed for statistical analysis.