

Supplementary Materials

Figure S1

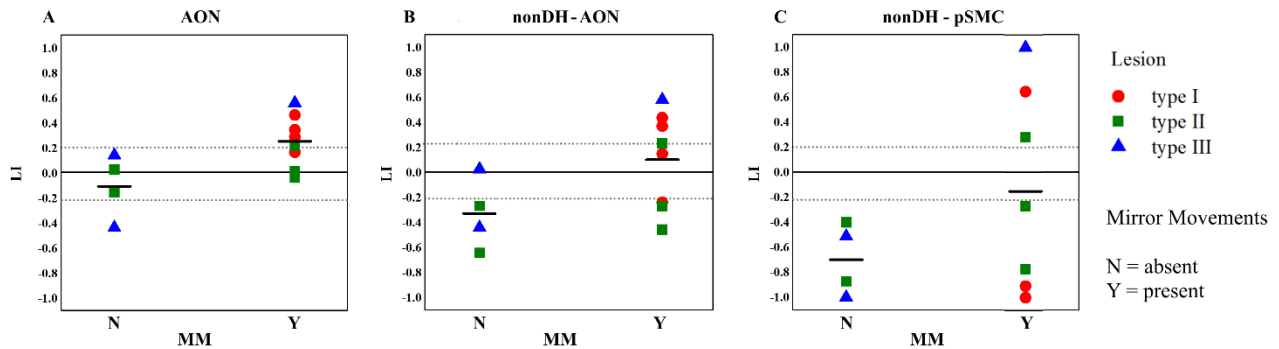


Figure S1: Box-plots of LI values obtained by different contrasts (A. AON task: all TASK>BASELINE; B. AON task: (C-ND + S-ND) > BASELINE; C. Sensory-Motor task: (Sens-ND + Mot-ND) > REST) in UCP children, grouped according to the absence or presence of Mirror Movements (MM, N=absence, Y= presence). As in figures 5 and 6, children were represented with different colours and symbols with respect to the classification of their lesions (Type I = red circles, Type II = green squares, Type III= blue triangles). Grey dotted lines represent the threshold value of $|0.20|$ for hemispheric lateralization.

A. For TASKS>BASELINE contrast of AON, children without MM had bilateral AON activation ($LI_N = -0.11 \pm 0.25$), except for one case (#10). On the contrary, children with MM presented either bilateral activation or higher activation in the hemisphere contralateral to dominant hand ($LI_Y = 0.25 \pm 0.21$). The difference was statistically significant ($p = 0.02$).

B. Both lateralization indices decrease accordingly when the previous analysis was performed considering only observation of non-dominant hand: $LI_N = -0.33 \pm 0.28$ for MM-N and $LI_Y = 0.10 \pm 0.38$ for MM-Y ($p = 0.05$, Mann-Whitney U Test).

C. Regarding SMN of non-dominant hand, UCP children presented different trends of LI values of pSMC, with respect to absence/presence of MM even if globally their differences were not statistically significant ($p = 0.24$). Children without MM showed a greater activation of pSMC in affected hemisphere ($LI_N = -0.70 \pm 0.29$). Children with MM not present a common behaviour, but rather a certain degree of variability ($LI_Y = -0.15 \pm 0.80$).