P01-197 - **PROSACCADES AND ANTISACCADES IN INDIVIDUALS WITH ADHD AND AUTISM USING THE GAP/OVERLAP PARADIGM**

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Saccadic reaction time (SRT), is a good index of visual attention pattern. “Gap/overlap paradigm” is supporting the idea that state of attention (engaged/disengaged) influences the SRT toward stimulus. In “overlap”, fixation point (FP) and target overlap; while in “gap”, FP extinguished before target onset. 200ms gap is associated with reduced RT compared with the overlap (“gap effect”).

Boys aged 7-16, with diagnosis of ADHD, ASD or comorbid ASD+ADHD (FSIQ>70) were tested on antisaccades and prosaccades under gap, overlap, and step conditions.

Preliminary result of 15 ADHD, 7 ASD and 8 co-morbid subjects is reported with data collection still ongoing. For latency, there was an effect of Task ($P< 0.05$), i.e. slower latency during antisaccades than prosaccades, and there was an effect of condition ($P< 0.05$) suggesting increase in latency from gap to step to overlap. These effects were highly significant but independent of group ($p=0.7$). For error rate there was an effect of task (($P< 0.05$; more directional errors in antisaccade than prosaccade) but no effect of condition. Task effect was independent of group, but there was a strong trend towards an effect of Group ($p=0.055$); this effect indicates that the comorbid group had the lowest error rates compared to the other two groups, who in turn were very similar to each other.

These data replicate previously demonstrated saccadic task in patients with ADHD, and ASD. Comparison of the data with a control group will enable us to explain the different patterns of attentional processing in these clinical groups.

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