

schizophrenia. Motor overflow, involuntary movement occurring during voluntary movement, is one such NSS found in schizophrenia.

Method: Thirty-seven participants (19 with schizophrenia, 18 controls) were tested. Participants exerted 25% and 75% of their maximal force output while overflow was monitored in the passive hand. Three transcranial magnetic stimulation protocols were designed to investigate the cortical origin of motor overflow: 1) motor cortex was stimulated unilaterally at 140% RMT; MEPs were recorded bilaterally; 2) stimulation of ipsilateral hemisphere at 140% RMT was performed during motor overflow. Resulting latencies between the cMEP onset and the iSP onset were compared; 3) facilitated MEPs produced (through stimulation of contralateral hemisphere) during voluntary contraction and facilitated MEPs produced during motor overflow were compared. All procedures were applied to both hemispheres.

Results: Previous findings of increased motor overflow in schizophrenia compared with controls were confirmed ($P > 0.05$); neither group showed a significant difference between MEPs facilitated during voluntary movement and those facilitated during motor overflow ($P > 0.05$).

Conclusions: Results suggest that in both groups, motor overflow results from an imbalance between the transcallosal processes occurring during voluntary movement, leading to bilaterally active corticospinal tracts. Specific deficits in cortical excitability are likely to be responsible for greater overflow seen in schizophrenia.

Central auditory processing deficits in patients with auditory hallucinations as shown by event-related potentials: preliminary results

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Background: It has been proposed that auditory hallucinations result from cortical or corticosubcortical disconnection. The results presented here are an initial event-related potential (ERP) exploration of data examining central auditory function and cortical connectivity.

Methods: Twenty-two controls, 26 nonhallucinating patients with psychosis and 22 currently hallucinating

patients (AVH) with psychosis were recruited. ERPs to words and tones (left ear, right ear and bilaterally) were recorded during a passive listening task. Data from the left and right ear stimuli are presented here.

Results: The auditory N1 ERP was measured in two seven-channel composite regions – left temporal and right temporal. Words: N1 is enhanced contralaterally in the control group. With left words, both patient groups show reduced N1 in the right hemisphere. With right words, both patient groups show a reduction in the left hemisphere. Only AVH patients show a reduction in the ipsilateral hemisphere. Tones: No contralateral N1 enhancement is evident. With left stimuli, both patient groups show reduced N1 compared with controls in both contra- and ipsilateral hemispheres. With right stimuli, only the AVH group shows a reduction in both hemispheres.

Conclusions: The tones data confirm previous studies showing a reduced right ear advantage behaviourally in patients with schizophrenia, especially in those who hallucinate, suggesting a neurobiological origin for such behaviour. The word data suggest that more complex stimuli have a unique linguistic quality that has been more strongly lateralized. Having shown ERP differences in processing of lateralized words and tones, our next step is to look at left-right hemisphere connectivity.

Self-reported depression and reduced bone mineral density in a community sample of men: Geelong Osteoporosis Study

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Background: Previous research in psychiatric and community samples has shown reduced bone mineral density (BMD) in individuals with clinical depression and depressive symptoms, although the findings are equivocal. This study investigated the association between self-reported depression and BMD in a community sample of men aged 20–96 years enrolled in the Geelong Osteoporosis Study.

Methods: A self-report questionnaire based on DSM-IV criteria was used to determine lifetime prevalence rates of depression within the study sample at baseline. Those currently taking oral glucocorticoids, testosterone or bisphosphonates were excluded ($n = 23$), resulting in a sample of 1279 men.

Results: In this sample, 155 men (12%) reported a lifetime history of depression (LHX). There were