## 077 EXTERNAL TRIGEMINAL NERVE STIMULATION (ETNS) FOR EPILEPSY

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We offer patients with drug resistant epilepsy (aged 9+) eTNS and audit outcome. A self-adhesive electrode is placed on the forehead stimulating both trigeminal nerves (120 Hz, 30 seconds on/off). Patients set the current (noticeable/comfortable, <10mA, aiming >8 hours overnight).

Results mean±SD, comparisons: paired ttest.

Seven children started eTNS but two discontinued early (headache). Another developed transient hypopigmentation from the adhesive. Outcome for other 5 awaited.

Sixteen adult started eTNS before October 2013. Two discontinued early (disliked sensation/unhappy with seizure pattern) and one after 15 weeks (efficacy). The remaining tolerated eTNS, completing 18 weeks; 8 chose to continue (116–277 days to date). One had transient forehead reddening when hot. eTNS was worn for  $6^{1}/_{2}$ -12 hours/night with currents 2.6–7.6 mA. Efficacy could not be assessed in four.

Of the remaining 10, seizure rate reduced from baseline 2.9  $\pm$ 1.9 to 2.2 $\pm$ 1.5 at 18 weeks (p=0.07): 5 had a greater than 30% reduction (one 50%). QOLIE-10w improved from 37 $\pm$ 26 (n=12) to 18 $\pm$ 17 (n=10), p=0.02, and BDI from 12 $\pm$ 8 (n=12) to 6 $\pm$ 5 (n-10), p=0.01. There was significant improvement in Pittsburgh and Epworth scales (p=0.04).

These data support the safety, efficacy and tolerability of eTNS.