



Edinburgh University Student SSC/Project Report

Supervisor and position	Dr R. P. Mills- Consultant in ENT Surgery
Contact details of your supervisor	rmills@staffmail.ed.ac.uk
Hospital/unit/clinic	Edinburgh Balance Clinic, Lauriston Building, Lauriston Place
Topic (rough topic area, e.g. Orthopaedics)	ENT surgery
Title of Project	Control of vertigo and hearing change following chemical labyrinthectomy
Authors	Sarah Stewart
Please give an overview of what your research was on(200 words max)	<p>Vertigo is a major cause of morbidity worldwide, and is frequently due to endolymphatic hydrops manifesting as Meniere's Disease. Over the past four years, thirty two patients have presented to the Edinburgh Balance Clinic with intractable vertigo and have undergone intratympanic gentamicin (ITG) application to produce a chemical labyrinthectomy. Although many studies have shown that an improvement in vertiginous symptoms is often associated with a profound sensorineural hearing loss, little research has been conducted into whether a relationship exists between the extent of vertigo improvement and the degree of hearing deterioration. Audiometry data from both pre- and post- ITG application was analysed in conjunction with results from a questionnaire that was distributed to all patients.</p> <p>According to the questionnaire, 97% of patients reported an improvement in their vertigo with over a third (39%) experiencing complete resolution of symptoms. Hearing had worsened in 52% of those questioned This compares to 38% one month post-procedure, based on audiometry results. No significant relationship was found between the extent of vertigo improvement and concomitant hearing change. Further research is required with a larger cohort of patients to explore this avenue of treatment more fully.</p>
What were the best things about the	I enjoyed doing a project whose speciality makes up a very small proportion of surgical procedures in the UK, but yet can have an

<p>project? (150 words max]</p>	<p>enormous impact on a patient's quality of life. Additionally, I found doing a research project in a surgical specialty where there is still a huge amount of research potential and questions to be answered exciting and it certainly opened up a new option for my future career choices. The surgical procedures that I had the opportunity to observe were varied and incredibly complex procedures, and an opportunity to see microsurgery firsthand for the first time in my medical career. Following the patients from their initial clinic appointment, through their surgical procedure and at their follow up a few weeks post-op enabled me to track their progress and for the first time see a patient's surgical journey from start to finish.</p>
<p>What problems did you encounter? (150 words max)</p>	<p>My project was principally based on results obtained from questionnaires. This understandably doesn't have a particularly high response rate, especially when sent by post. This led to a long period of time before any results were collated which proved to be problematic as the deadline approached! The cohort size was also disadvantageous and certainly reduced the viability of the statistical tests I carried out on the data. It is likely that if I had a larger number of subjects I may have attained some significant results which would have given my project more weighting when considering publication.</p> <p>Furthermore, aside from audiometry results pre- and post-procedure there was very little objective data I could have used for my results. To this end, I had to base my project on the subjective opinions of the patients, which vary hugely depending on initial quality of life, expectations of surgery, pain thresholds and what they anticipated the outcome to be. I feel that this decreased the validity of my results to some extent.</p>
<p>Techniques used in the project (in brief. Only really relevant if lab project, e.g. Western blotting, PCR, audit...)</p>	<p>N/A</p>
<p>Give details of any Surgical Experience you have gained</p>	<p>N/A</p>
<p>Details of any presentations or publications to arise from this project</p>	<p>Presentations (including posters) N/A</p>
	<p>Publications (including Abstracts) N/A</p>
<p>Your name:</p>	<p>Sarah Stewart</p>

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James Blackmur
ESSS Publicity Secretary
On behalf of the ESSS Committee

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