up a telephone clinic for Neuro-Oncology follow-up patients. We aimed to reduce the burden of patients attending outpatient clinics and improve the follow-up experience for patients who were stable on surveillance imaging. METHODS The telephone clinic was offered to selected Neuro-Oncology patients. Only patients stable on standard outpatient follow-up for 12 months and who understood that they may receive bad news over the telephone were eligible. If they were accepting of this and consented to telephone follow-up they were transferred to this clinic. After at least one telephone clinic appointment they were sent a questionnaire to assess their satisfaction. RESULTS 34 patient satisfaction questionnaires were sent out to all attendees of the telephone clinic. 26 (76%) responses were received. The respondents were aged 24–74 years and were predominantly male (73%). 24 (92%) had a diagnosis of Glioma and the majority of these were high grade (6 low grade patients: 18 high grade patients). There was a consensus from all patients that the telephone clinic was beneficial to their patient experience. It was found to be a prompt way to deliver information and reduce stress levels, as well as eliminating associated travel time and costs. 100% of patients surveyed preferred telephone clinic appointments to a standard outpatient appointment. CONCLUSION From our initial survey, telephone clinics appear to reduce burden on outpatient neuro-oncology services whilst maintaining high levels of patient satisfaction. REFERENCES 1.) Oberg I, Price S. Nurse-led telephone clinics improve patient satisfaction and enhance follow up for benign/low grade tumour patients. Neuro-Oncology 2017. Available: https://academic.oup.com/neuro-oncology/article-abstract/19/suppl_l/i10/3059769 [Accessed 01/02/2018].

INTRAMEDULLARY SPINAL CORD TUMOURS - A SINGLE CENTRE RETROSPECTIVE 10 YEAR ANALYSIS

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BACKGROUND: Intramedullary spinal cord tumours are relatively rare tumours of the central nervous system. Surgical outcomes are affected by many variables, including pre-operative neurological function, tumour histology and extent of resection. Emphasis remains on surgical treatment due to the limited adjunctive therapeutic options and poor drug penetration. OBJECTIVE. To identify clinically relevant predictors of progression free survival by retrospectively analysing the anatomical location, pre- and post-operative function and histology in intramedullary spinal cord tumours from a single neurosurgical centre over 10 years. METHODS. 49 patients were identified from a surgical database. Variables collected included pre-and post-operative Frankel Grade and Modified McCormick Scale assessments, tumour histology, extent of resection and length of follow up. Chi-Squared, Kaplan-Mier Survival and Mann-Whitney U-Tests were completed. RESULTS. Ependymoma, Haemangioblastoma and Pilocytic Astrocytoma were the commonest tumour histologies. In total 21 different histological tumours were identified in the series. There was a statistically significant relationship between identification of the tumour plane and extent of resection ($p<0.01$), along with the extent of resection and recurrence ($p<0.01$). Compared to the other histological subtypes, ependymoma's demonstrated a significantly greater extent of resection ($p=0.02$). There was a significant relationship between the grade of tumour and progression free survival ($p<0.01$). We did not find a significant relationship between pre- and post-operative neurological function and survival. CONCLUSION. Tumour plane and the extent of tumour resection are significant determinants of progression free survival. Ependymoma, whilst being the commonest histology in our series were also the most resectable. Whilst complete resection reduces the rate of recurrence, tumour grade is the most important predictor of outcome.

SYSTEMATIC REVIEW AND META-ANALYSIS: ARTERIAL APIN LABELLING (ASL) EFFICIENCY IN GRADING OF ADULTS GLIOMA

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Through a systematic review, the research quantitatively evaluates the efficiency of arterial spin labelling (ASL) in identifying glioma grades. EMBASE and MEDLINE were consulted, and 18 studies were selected. In turn, quantitative data were gathered, and a meta-analysis conducted. 8 included studies published CBF values as a mean and SD; 3 published cut-off values and sensitivity/specificity levels; while the remainder addressed both. Tumour blood flow (TBF) references were different, and so were renamed as follows: the TBF was denoted the mean (TBFmean/rTBFmean); the ROI incorporated the whole tumour; or the ROI was chosen with standard images (e.g., T2W). The identified ROI for the perfusion map's high signal was denoted the maximum (TBFmax/rTBFmax). QUADAS-2 was used for quality appraisal, while statistical analysis was divided as follows: firstly, a random-effects model and a forest plot; and secondly, a system modelling specificity and sensitivity outcomes (owing to the inverse relationship that links them), paired with a hierarchical summary receiver operating characteristic (HROC) curve. The absolute TBF displayed the power to distinguish between HGG and LGG, along with grade-II from grade-IV. Nevertheless, it could not distinguish between grade-II and grade-III or grade-III and grade-IV. Contrastingly, rTBFmax was more effective in glioma grading. An identical outcome was derived from sensitivity and specificity analysis, with rTBFmax showing the highest levels for glioma grading. Estimated effect size for rTBF was compatible to HGG and LGG, as well as grade-II and grade-II ((-1.46, (-2.00, -0.91)), (-1.39, (-1.89, -0.89)), respectively; however, between grade-III and grade-IV, the effect size was reduced (-1.05, (-1.82, -0.27)). This result also derived from the sensitivity and specificity analysis, where ASL demonstrated greater sensitivity when distinguishing between grade-II and grade-III than between grade-III and grade-IV. It follows that ALS is effective for glioma grading when perfusion values show significant differences between glioma grades, especially rTBFmax.

DOING RESEARCH USING APPS IN THE NHS IS HARDER THAN IT SHOULD BE

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INTRODUCTION: The use of smartphone apps is an increasing theme for researchers worldwide. MyFitnessPal is a lifestyle app used by c.100 million people. BT-LIFE is a UK Randomised Controlled Trial of lifestyle interventions for fatigue after primary brain tumour, which has been in set-up. We wished to offer patients the option of using MyFitnessPal in BT-LIFE. METHODS. We prospectively surveyed The Brain Tumour Charity's Research Involvement Network of patients and carers. We studied the acceptability of using apps to record lifestyle information in BT-LIFE. Results are summarised descriptively and combined with a frontline narrative of our subsequent experience of sponsorship review. RESULTS. Survey: There were 19 respondents (mean age=49 years [range 31–75]). Of these, 18/19 had a smartphone or tablet which could use apps. Most respondents (16/19) expressed a willingness or preference to use apps, and apps were highly acceptable overall (mean acceptability [n=19] = 8.0 / 10, where 10 is 'very acceptable'). Narrative: However, the study sponsor was obliged by protocol to query the data protection procedures of the U.S. (non-EU) company that runs MyFitnessPal. That patients would give informed consent, and also have an option not to use the app, were considered irrelevant. The automatic query triggered multiple reviews, in series, that delayed ethical submission by months. This delay jeopardised the study opening date. Accordingly, we removed the app from the protocol. BT-LIFE subsequently opened on-time and is currently recruiting. CONCLUSIONS. Given the acceptability of apps and their ubiquitous use in real life, doing research using apps in the NHS is harder than it should be. Automatically objecting to an app used by millions in daily life may divert governance resources from higher-risk studies, and makes it difficult to do technologically savvy research. We should lobby for 'common sense' and streamlined research governance policies that befit modern life.

PINEAL REGION GLIOBLASTOMA: REPORT OF TWO LONG TERM SURVIVORS

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BACKGROUND: Pineal region glioblastoma (GBM) is an rare entity and is considered to have a poor prognosis similar to cerebral GBM. The current literature describes approximately 28 cases of pineal region GBM reported worldwide with no case series of more than 3 patients. Even with radical treatment the median survival is reported as 6 months (range 6–24 months) with occasional reports describing survival in the range of 24–38 months. METHODOLOGY: Retrospective audit of all cases of GBM treated in our unit between 2008 and 2018. Data were collected from pathology reports, case notes, clinic letters and MDT outcomes. RESULTS: We identified only two cases of pineal region GBM in male patients, aged 21 years and 50 years at the time of diagnosis (in 2013 and 2011 respectively), who are alive at 53 and 75 months since diagnosis. They are still under follow-up, maintaining a good performance status with no radiological evidence of tumour recurrence till date. Both patients had a biopsy, CSF diversion procedure, radical radiotherapy with concomitant temozolomide chemotherapy and 6 cycles of adjuvant temozolomide. CONCLUSION: Although the overall survival for GBM following only a biopsy and chemoradiotherapy is considered poor, our experience of these tumours in the pineal region show a longer survival with similar treatment, when compared to GBM in cortical location. A larger study including detailed molecular genetic analysis may help in better understanding of the tumour behaviour and whether the location in the pineal region may be of prognostic value. Due to the rarity of GBM in the pineal region, this may only be possible if multiple centres collaborate in such studies.