

in control of tumorigenic processes, by using tumour infiltrating lymphocytes. How this process works is still being established, however there remains a potential target for cancer specific immunomodulatory treatment regimens.

Aim (1) To identify tumour specific MHC class I phosphopeptide antigens on lymphoblastoid cell lines LCLs (an *in vitro* model for PTLD) as well as hepatic tumour tissues. (2) T-cells are immune cells which are notoriously difficult to maintain in long-term culture and as a result it is difficult to establish an 'off the shelf' T-cell product, however the aim of this project was to explore potential modalities for capturing the T-cell receptor (TCR), important in recognising tumour specific antigens and the resultant product could be used to establish a non patient-specific, but tumour specific product.

Patients and methods Paediatric and adult patients were identified with hepatic malignancy and consented as per current policy. Cells were isolated and tumour specific phosphopeptide antigens were identified. These provide the targets for T-cells, and more specifically TCRs. Having identified these antigens, modalities have been explored for expanding these cells. Hybridoma technology is long established in immortalising B-cells, and this study aims to explore its potential with immortalisation of T-cells.

Results A number of novel phosphopeptide antigens have been identified both *in vitro* as well as on patient tissues. This information has been used to identify potential T-cell targets and by formation of hybridomas we have established a method for expanding specific T-cell's *in vitro*. Although these hybridomas are currently unstable due to their tetraploid status, we aim to modify this protocol further to allow for stable expansion of hybridoma cells which possess the relevant TCR motif.

Conclusions Identifying a modality for expanding cells with a specific TCR repertoire clearly allows us to target tumour specific phosphopeptide antigens and has the potential to be developed as an immunomodulatory therapy in patients with hepatic tumours or PTLD.

G463(P) DETERMINING THE HEALTH NEEDS OF CHILDREN WITH SPECIAL EDUCATIONAL NEEDS

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Introduction The goal of the SEND reforms is to improve the outcomes of children with special educational needs (SEN) and disabilities. One key strategy is to improve the coordination and integration of education, health and care services through joint commissioning. Commissioning can only be effective when services are designed around the needs of their services users. Little is known about the health needs of disabled children for whom the lack of data for planning purposes is the single biggest challenge to better outcomes.

Aim

1. To describe the health problems and services use of children with SEN.
2. To pilot an approach to data collection for services planning.

A third objective, to assess the quality of medical reports, is reported separately.

Method We reviewed all the medical reports submitted between January and June 2014 for a Statement of Special Educational Needs (SEN). Additional hospital statistics were collected.

Results Data were analysed on 125 children, 78% boys and 22% girls, median age 6.9 years (1.9–14.8). 65% of children were known to community paediatrics and 25% to CAMH services. 6% of children were LAC, 5% on CP plan, and 15% excluded from school.

39% children had autism, 7% ADHD, 26% SEMH, 9% physical needs, 8% sensory impairment (all types), 26% SLCN, 46% learning difficulties (all types), 8% SpLDs. 55% of the children had multiple needs, 6% were complex special needs.

In the previous year 62% children attended hospital outpatients (1–16 visits), 10% of children were admitted to hospital (1–4 admissions) and 23% of children had been seen in A&E (1–7 visits). 50% of children were known to hospital specialities, 50% to S&L, 16% physiotherapy, 30% OT services.

Many children had associated health problems (19% medical, 18% nutrition, 9% continence).

Conclusions Children with SEN have extensive health needs and are high users of health services. Our data is likely to be an underestimate as we only analysed hospital statistics and medical reports whose quality varied.

SEN reports provide important health data. Data collection and analysis from a broader range of services continues. The new Education, Health and Care process provides an opportunity for prospective data collection for services planning.

G464(P) TIME TO DISCUSS PREVENTION STRATEGIES FOR GROUP B STREPTOCOCCUS DISEASE

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Aims Group B Streptococcus (GBS) can cause neonatal septicaemia, meningitis and rarely, infective endocarditis. Through this case study, we aim to raise awareness of the devastating sequelae of GBS disease and the importance of early recognition of complications.

Case discussion: A term infant born in good condition was being managed by the community midwifery team for feeding difficulties, failing to thrive and presented to A&E twice with lethargy and maternal concern. At two weeks of age he represented having additionally developed fever and was admitted and treated for GBS septicaemia and meningitis. He was discharged after 5 days to ambulatory care for continuation of antibiotics. 10 days into treatment his mother became worried and he presented to A&E in cardiogenic shock with a heart murmur, enlarged liver and rising lactate.

Once transferred to the Paediatric Intensive Care Unit, he required ventilation and inotropic support for poor cardiac output, and conservative medical treatment for necrotising enterocolitis, presumed secondary to embolic pathology. An echocardiogram demonstrated two large, mobile masses attached to the mitral valve leaflets with severe mitral regurgitation and right ventricular dysfunction, consistent with infective endocarditis in an otherwise structurally normal heart (Figure 1). Surgical repair of his valve was not possible and so a 17mm prosthetic St Jude's Valve was placed in the mitral position. Post-operatively he developed a low cardiac output state, seizures, and



Abstract G464(P) Figure 1 Four chamber view on 2D echocardiogram showing mobile, echogenic vegetations measuring 9.2×3.6 mm, and 3.8×3.2 mm on leaflets of the mitral valve, bulging into left atrium and left ventricle

recurrent thrombus formation requiring valve replacement. He is currently stable on full anticoagulation therapy.

Conclusion Our case highlights the aggressive nature of GBS with potentially fatal complications requiring a high index of suspicion, as only with early recognition and management of endocarditis can morbidity and mortality be improved. We recommend that repeated parental concern in the context of failing to thrive, lethargy or fever should alert health professionals to the possibility of sepsis.

Although Screening for GBS is not recommended by the UK National Screening Committee nor the Royal College of Obstetricians and Gynaecologists, it has a high profile in the United States where the Centres for Disease Control and Prevention recommends routine screening for all pregnant women, and we suggest this should be so in the UK.

G465(P) THE ROLE OF THE SCHOOL DOCTOR TODAY: AN ADVOCATE FOR CHILDREN WITH OBESITY

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Aims To evaluate school doctor service with regard to weight problems in a Secondary School for students with special needs

Background School medicals are only offered based on teacher's concerns and there was no existing health screen of potential need.

The school doctor was concerned about potential unaddressed weight problems.

Methods All students were offered a medical by opt-out permission letters to parents, also asking about concerns (diet, sleep, behaviour or other).

Teachers were asked to identify students they felt had an unhealthy BMI.

All students consenting were measured by multidisciplinary team (School doctors, School Nurse, Special Needs specialist dietician, Specialist nurse for obesity).

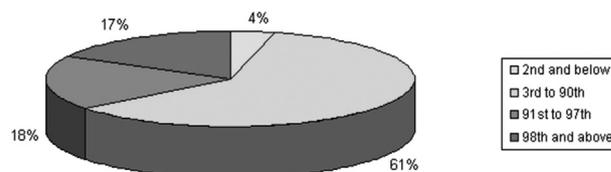
We calculated BMI centile on WHO growth charts.

An action plan was developed by the school doctor and team as part of this service evaluation.

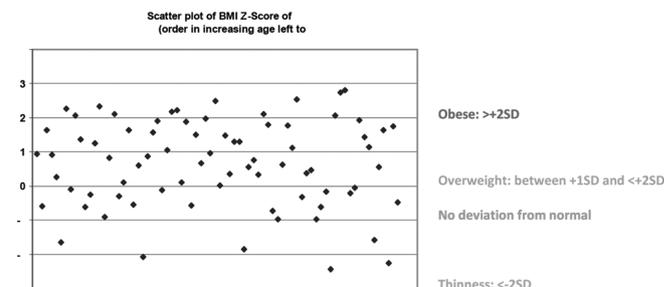
Results 1 family and 2 students refused. 2 parents concerned about appetite.

Teachers correctly identified 13 / 29 students as having a problem with their weight.

76 / 79 students assessed. BMI range 15 to 50. 30/76 (35%) met criteria for referral to special needs dietician, increasing service yearly caseload by a third. 27/76 (35%) were $\geq 91^{\text{st}}$ BMI centile. 13/76 (17%) were $\geq 98^{\text{th}}$ centile (see Figures 1 and 2).



Abstract G465(P) Figure 1 BMI centiles



Abstract G465(P) Figure 2 WHO: A simple guide to classifying body mass index in children 2011