P06 THE EPIDEMIOLOGY OF TYPE 1 DIABETES IN CHILDREN FROM NORTHEAST ENGLAND

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Objective Environmental factors are involved in the aetiology of type 1 diabetes. A particular role for infectious exposures has been postulated. Temporal and spatial variation in incidence would be consistent with this hypothesis. We aimed to test predictions of increasing incidence and spatial variation occurring among cases of type 1 diabetes in children (aged 0–14 years) that might arise as a result of environmental mechanisms.

Design Population-based descriptive analysis of type 1 diabetes data.


Participants The study analysed 545 cases of type 1 diabetes diagnosed in children who were resident in a geographically defined region of northeast England during the period 1990–2007.

Main Outcome Measures Age-specific and age-standardised incidence rates were calculated. Temporal trends were analysed using Poisson regression. Relationships between incidence rates and small area (census ward) population density and Townsend deprivation index (and its components) were analysed using negative binomial regression.

Results Age-standardised incidence rates increased from 15.7 per 100,000 population in 1990–1995 to 27.9 per 100,000 population in 2002–2007. Furthermore, there was a regular 6-year cyclical pattern of plus or minus 25% in incidence rates (RR 1.25; 95% CI 1.11 to 1.41) and an overall increase of 4.8% per annum (95% CI 3.1 to 6.6). Lower incidence was associated with residence in wards that had higher levels of unemployment (RR per one percent increase in unemployment 0.97; 96% CI 0.95 to 0.99).

Conclusions The results are consistent with the involvement of one or more environmental exposures in aetiology. A possible role for a specific infectious agent should be considered.

Cancer

P08 CANCER OF OESOPHAGUS OR GASTRICUS—NEW ASSESSMENT OF TECHNOLOGY OF ENDOSONOGRAPHY: FINDINGS

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Objectives Endoscopic ultrasound (EUS) is recommended for staging gastro-oesophageal cancers but has never been rigorously evaluated. This trial assessed whether EUS, when added to usual staging tests, changes treatment; improves survival and quality of life; and uses resources cost-effectively.

Methods We conducted a pragmatic randomised trial in eight centres. As 80% of participants came from two centres, we combined the other centres for analysis. Patients diagnosed with gastro-oesophageal cancer received a standard staging protocol, after which the multi-disciplinary team agreed a provisional management plan. In principle the choice lay between endoscopic mucosal resection, immediate surgery, neoadjuvant chemotherapy followed by surgery, or multi-modal treatment (ie chemotherapy and radiotherapy). We then randomised consenting patients without metastases by telephone to receive EUS or not. Thereafter we recorded changes in the management plan, in the use of healthcare resources and in participant-reported outcomes. In particular we focused on three facets of quality of life: generic (measured by the EQ5D), cancer-related (FACT general scale and subscales) and condition-specific (FACT additional concerns scale). We then followed participants at defined intervals till the end of the trial—that is for between one and 3.5 years.

Findings We randomised 223 patients, of whom 213 yielded enough data for primary analysis. At the end of the trial 45% of EUS