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Increased health utilisation before MS diagnosis: evidence from the SAIL Databank

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Objectives

Using an algorithm to identify people with Multiple Sclerosis (pwMS) in routine healthcare data we determined if there was any evidence of an MS prodrome by looking at healthcare utilisation in Wales in those before the age of 16 (pre-16) and before the diagnosis of MS (pre-Dx) was made.

Method

Using the Secure Anonymised Information Linkage (SAIL) Databank of 4.6 Million people in Wales, we identified inpatient admissions (top 10), GP attendances (top 10) and prescriptions (top 20) in pwMS and separate propensity matched controls (by gender and year of birth) pre-16 and also pre-Dx. We identified entries unique to MS, excluding MS/demyelinating codes, and assessed whether entries common to both groups were significantly different.

Results

Pre-16 (N=313), admissions unique to MS included constipation (4.8%) and dental caries (3.5%); there was no significant difference in the 6/10 ICD-10 codes shared between pwMS/control cohorts. Pre-Dx (N=5,309), sensory symptoms (4.3%), paraesthesia (3.8%), headaches (3.7%) and urinary tract infections (3.6%) were unique to pwMS with the remainder 4/10 not being different between pwMS/control cohorts.

For GP attendances (pwMS N=4798 pre-16, N=9648 pre-Dx) there were higher rates of attendances but no unique causes for attendance. In pwMS versus controls pre-16 they had more respiratory infections (pwMS 14.2%, $p<0.001$), consistent with this pre-16 they had higher rates of penicillin use. Pre-Dx they had more vaccinations and used more antibiotics, paracetamol, anti-inflammatories, hydrocortisone and PPI inhibitors.

Conclusion

pwMS have higher healthcare utilisation pre-16 and pre-Dx. This requires further study but does imply a MS prodrome.



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