Key finding

Fibromyalgia patients are more likely to have healthcare interactions with surgical specialties before diagnosis, co-morbidities and opiate burden, with potential for harm

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Using a Whole-population Approach to Help Design More Effective and Efficient Healthcare Services for People with Fibromyalgia

Aim: To determine, among persons with fibromyalgia, co-morbidities, opiate burden and healthcare use before diagnosis, compared to controls.

Population:

- ***Cases***: Patients with fibromyalgia ≥18 years with a fibromyalgia code in their primary care records between 2004-18.
- ***Controls***: Each case was matched with up to four controls by sex, age, socio-economic status, and with a code for any health care use within 30 days of the code date (index date) of the case.

Data source: Deidentified National Health Service health and care data in the Secured Anonymised Information Linkage (SAIL) databank for the whole population of Wales, UK.

Outcomes of interest: Co-morbidities, measures of adverse life events, prescriptions, outpatient specialty visits and hospital admissions, including surgery.

Results:

19, 742 patients and 76, 746 controls were included. Fibromyalgia patients had median age 48 years, and 89% female. Depression/anxiety (74%) and sleep disorders were commonly recorded (24.8%).

Compared to controls, fibromyalgia patients were more likely to have:

- higher BMI (30.3 v 28.8 kg/m2)
- current/ex-smoker (73 v. 68%)
- co-morbidities, see Table 1, specifically inflammatory arthritis (5.4 v. 2.2%) and inflammatory bowel disease (1.9 v. 1.1%)
- codes for stress and bereavement (27.2 v. 17.6%) and adverse life events (10.7 v. 8.8%)

For fibromyalgia patients, 95% were prescribed anti-depressants, 82% opiates, 51% gabapentinoids and 44% steroids.

In the year prior to diagnosis almost half of fibromyalgia cases had been referred to each of General Surgery, Orthopaedics and Gynaecology. Referrals to Gastroenterology, Neurology, and Pain Management were also common in fibromyalgia patients, see Table 2.

Table 1. Prevalence of co-morbidities in cases (fibromyalgia) and controls

	Cases (fibromyalgia) (n= 19,742)	Controls (n= 76,746)	Difference (95% CI)
Hypertension	26.3%	25.0%	1.3% (0.6 to 2.0)
Hyperlipidaemia	12.3%	9.0%	3.4% (2.9 to 3.9)
Cardiovascular Disease	7.1%	5.6%	1.5% (1.1 to 1.9)
Diabetes	11.7%	10.0%	1.8% (1.3 to 2.3)
Cancer	9.0%	10.3%	-1.3% (-1.7 to -0.8)
Kidney disease	0.2%	0.1%	0.1% (0.02 to 0.2)
Digestive disorders (general)	77.6%	58.5%	19.0% (18.3 to 19.7)
Irritable bowel syndrome	23.7%	10.1%	13.6% (12.9 to 14.2)
Inflammatory bowel disease	1.9%	1.1%	0.8% (0.6 to 1.0)
Inflammatory arthritis	5.4%	2.2%	3.2% (2.9 to 3.6)
Respiratory conditions	12.5%	7.2%	5.3% (4.8 to 5.8)

Table 2. Referral to specialist (outpatient) one year before fibromyalgia diagnosis (cases) and index date (controls)

	Cases (%) (n = 19,742)	Controls (%) (n = 76,746)	Difference (%) 95% CI
Cardiology	19.1%	9.4%	9.7 (9.1 to 10.3)
Dermatology	23.8%	14.1%	9.7 (9.1 to 10.4)
Gastroenterology	17.8%	7.7%	10.1 (9.6 to 10.7)
Genitourinary Medicine	0.1%	0.1%	0.0 (-0.02 to 0.1)
Haematology	8.3%	4.9%	3.4 (3.0 to 3.9)
Renal medicine	1.9%	1.6%	0.3 (0.1 to 0.5)
Neurology	19.9%	6.6%	13.3 (12.8 to 13.9)
Neurophysiology	5.6%	1.7%	3.9 (3.6 to 4.3)
Oncology	0.7%	0.7%	0.0 (-0.1 to 0.2)
Ophthalmology	0.1%	0.1%	0.0 (-0.04 to 0.1)
Pain management	13.4%	2.1%	11.3 (10.7 to 11.7)
Physiotherapy	2.4%	1.6%	0.8 (0.5 to 1.0)
Psychotherapy	0.3%	0.1%	0.2 (0.1 to 0.3)
Radiology	1.5%	0.8%	0.7 (0.6 to 1.0)
Respiratory Medicine	10.3%	4.8%	5.5 (5.1 to 6.0)
Rehabilitation	6.6%	1.5%	5.1 (4.7 to 5.5)
Rheumatology	5.6 %	1.7%	3.9 (3.6 to 4.3)
General Surgery	47.0%	27.3%	19.7 (18.9 to 20.5)
Orthopaedics & trauma	49.2%	26.8%	22.4 (21.7 to 23.2)
Gynaecology (female patients)	46.8%	28.7%	18.1 (17.4 to 19.0)

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