Functional neurological disorder in patients with chronic pain; a retrospective study of comorbidity

Isabel Mason, Laura McWhirter, Alan Carson, Jon Stone, Ingrid Hoeritzauer

University of Edinburgh Medical School

Summary

Functional neurological disorder (FND) comorbidity is surprisingly common in patients attending a chronic pain clinic.

Pain patients with comorbid FND differ from those without FND in terms of type of chronic pain and prevalence of depression but not in pain management or pain outcome.

Introduction

Chronic pain is a commonly reported comorbidity in patients with FND.

Patients with functional limb weakness are more likely to experience comorbid chronic pain than other neurological disorders (Stone et al, 2020) and chronic pain conditions are present in 47% of those with dissociative seizures (Gazzola et al, 2012).

Despite this overlap the prevalence of FND in patients presenting with chronic pain is unknown.

Aims

1) Estimate the prevalence of FND in patients attending a chronic pain clinic

2) Explore how patients with chronic pain and comorbid FND differ from those without FND in terms of
   - pain characteristics
   - psychiatric comorbidity
   - pain management
   - pain outcome

Methods

A retrospective electronic notes review of consecutive patients attending a chronic pain clinic was performed.

Recruitment

- The Lothian chronic pain clinic is an outpatient service that sees approximately 550 patients per month with a team of 8 consultant anaesthetists and 5 pain specialist nurses.
- Inclusion criteria = Patients presenting to the Lothian chronic pain clinic from August 1st to September 19th 2019.
- Exclusion criteria = patients attending for nurse appointments, follow up or procedures alone.

Measures

- Chronic pain characteristics (duration, trigger and type of chronic pain)

  Chronic primary pain = pain >3 months with no identifiable underlying pathology

  Chronic secondary pain = pain > 3 months with identifiable underlying pathology
- Chronic pain management (medication and follow up decision)
- Chronic pain outcome
- Lifetime comorbid diagnoses (psychiatric and functional)
- Lifetime undiagnosed neurological symptoms (where it was unclear if symptoms related to FND or another condition)

Results

190 new patients were seen by a doctor in the data sampling period.

52% suffered from chronic primary pain, with widespread (22%) and back pain (18%) the most common.

48% suffered from chronic secondary pain with neuropathic (20%) and musculoskeletal (17%) the most common.

No pain-precipitating event was identified in 51% of patients whereas disease (25%), injury (14%) and surgery (11%) were precipitating in the remainder of patients.

How common are Functional Diagnoses?

At least one **FND** had been diagnosed in **32 (17%)** of patients.

The most common FND diagnoses were functional limb weakness (8%), functional sensory disorder (8%), dissociative seizures (6%), functional cognitive disorder (5%) and functional movement disorder (4%).

An additional 8 (4%) of patients had undiagnosed neurological symptoms.

IBS and non-cardiac chest pain diagnoses were prevalent in 20% of patients.

How do pain patient with comorbid FND differ from pain patients without comorbid FND?

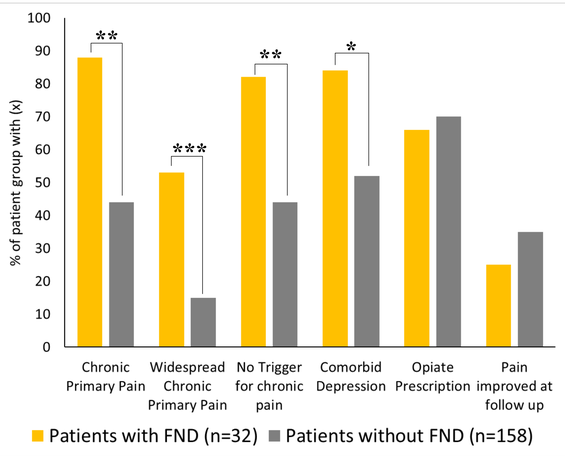

*Figure 1; Bar chart comparing characteristics of pain patients with and without FND as a percentage of their patient group. * indicates p <0.05, ** indicates p<0.01 and *** indicates p<0.00001. Statistics performed using chi-squared test in R studio.*

Conclusion

The main result of this study is that the prevalence of FND in chronic pain clinic attenders is 17%. This is likely a minimum prevalence level as retrospective analysis precludes a formal assessment and an additional 4% had undiagnosed neurological symptoms.

Considering there is already well-documented comorbidity of chronic pain in FND patients, it seems likely that FND and chronic pain commonly co-occur. These findings signal the need for prospective studies on FND and chronic pain comorbidity to investigate whether this relationship is bidirectional.

This study also found that Patients with chronic pain and FND are significantly more likely to have chronic primary pain and especially widespread chronic primary pain compared to other pain patients. They are also more likely to have no precipitating trigger to their chronic pain and to have had a lifetime diagnosis of depression. However pain patients with FND do not experience different pain management or outcome than pain patients without FND.

Overall, these results provide further evidence of the important overlap between FND and chronic pain conditions.

References

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2. Stone, J., Warlow, C., Deary, I. and Sharpe, M., 2020. Predisposing risk factors for functional limb weakness: a case-control study. The Journal of Neuropsychiatry and Clinical Neurosciences, 32(1), pp.50-57.