Headache Diagnosis in Enhance patient satisfaction

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Abstract

Introduction

Doctors in primary care are responsible for diagnosing and managing patients with headache, but frequently lack confidence in doing so. We aimed to compare Family Practitioners’ (FPs) diagnosis of headaches to classification based on a symptom questionnaire, and to describe how classification links to other important clinical features.

Methods

This was an observational study of patients attending primary care doctors for headache.

Main outcome measures

Patients completed a questionnaire including the Headache Impact Test, the Migraine Disability Assessment Score, the Hospital Anxiety and Depression Scale, the Illness Perceptions Questionnaire, a satisfaction scale, a service use inventory and a symptom questionnaire rated by two Practitioners with Special Interest (PSIs) in Headache.

Results

255 patients completed questionnaires. There was low agreement between FP diagnosis and classification using the symptom questionnaire. FPs frequently did not use the diagnosis migraine, when patient reported symptoms which justified this. FPs did not classify patients with ≥15 days of headache separately as chronic daily headache (CDH), and this could be because the classification system used does not have that code. Patients classified as CDH using the symptom questionnaire reported more disability, more symptoms of anxiety and depression (HADS), more service use, and less satisfaction with FP care.

Conclusion

Patients, who present with headache in primary care, tend to receive non-specific diagnoses. Having a system that would allow separate classification of people with headache of ≥ 15 days a month might help FPs to explore and address associated features with patients in terms of disability, psychological co-morbidity and cost, and improve satisfaction with care.

Keywords

Diagnosis; Primary care; Headache; Migraine; Chronic daily headache

Introduction

Headache is common and 4% of adults consult their family practitioner (FP) for headache each year, with 97% managed entirely in primary care [1]. Doctors frequently express lack of confidence in diagnosing neurological conditions, which may partially be due to lack of appropriate clinical teaching [2]. We described the characteristics of patients with headache consulting FPs, and found nearly 30% had case-levels of anxiety [3]. Reasons FPs gave for referring to neurologists included the patient’s anxiety about brain tumor, and the FP’s lack of confidence in diagnosis [4]. We previously estimated UK service costs for people consulting with headache are £956 million and the total costs including lost production are £4.8 billion [5].

Guidelines on headache classification are disputed and have changed over time [6,7]. It is not clear how classification systems designed by neurologists and academic researchers can contribute to clinicians working in primary care. Comparison of FP diagnosis with expert classification has suggested under-diagnosis of migraine and under-use of migraine-specific management [8, 9]. Common headache types seen by FPs are migraine with and without aura, episodic tension-type headache (TTH), and chronic daily headache (CDH = headache lasting on average for ≥4 hours on ≥15 days per month).

Secondary (sinister) headaches and cluster headache are rare. A major strength of UK primary care has been the computerization of patient records using the Read-code system, which has more than 30 codes for the common headache and migraine diagnoses. However, Read-codes were not designed to mirror or adapt to emerging criteria produced by specialists and researchers, such as the International Headache Society (IHS) classification of headache and migraine.

We aimed to describe the diagnoses made by FPs using Read-code data (http://www.connectingforhealth.nhs.uk системыandservices /data /ukt/readcodes), and compare them to a classification applied on the basis of symptoms reported by patients in a questionnaire, which was rated independently by two Practitioners with Special Interest (PSI) in headache. We aimed also to describe the extent to which PSIs’ classifications were associated with other characteristics of headache consulters which may be important in management, including headache impact, disability, psychological state, service and lost-productivity costs and satisfaction with care.

Patients and Methods
Not all patients stated their earnings and in these cases we obtained average figures for their job type and gender from official data [17].

**Data Analysis**

Data were analysed using SPSS version 8. Data were analysed using non-parametric tests for categorical variables, and with t-tests for continuous data where differences were compared between diagnostic groups. Statistical methods are described in details elsewhere [18].

**Results**

**FPs’ diagnosis from Read-codes** of the 34 Read-codes available, nine were used by the FPs in this study, and we combined these codes, so that only the stem diagnosis was used. Of 255 patients, FPs classified 80 (31%) patients as having migraine (FP-migraine) and 144 (57%) as headache (FP-other headache), 23 (9%) tension headache, and for the remaining 8 (3%), headache was not classifiable.

**PSIs’ criteria-based classification**

Using the criteria-based classification, 163/255 patients (63.9%) reported experiencing a single type of headache, and 92 patients (36.1%) experienced two or three different types of headaches. Ten patients (4%) did not provide enough information for a classification. Where there was more than one type of headache reported, the higher category in terms of severity was applied. Using this strategy 152 (60%) patients were classified as migraine, 78 (31%) were classified as CDH, and the remaining 15 (6%) were classified in less common diagnostic groups, and subsequently excluded from further analysis.

**FP Read-code diagnosis compared to PSI criteria-based classification**

Table 1 shows that for migraine, there was agreement between the FPs’ diagnosis and the PSI criteria-based classification in 55 cases (37% of 147 classified as migraine by PSIs). A further 92 (63%) cases which were classified as migraine using the criteria, were diagnosed as other types of headache by FPs (84 other headache and eight tension headache). FPs did not have a code with which to identify people with headaches on ≥ 15 days per month (CDH), and classified 45/76 (59%) as headache, and 17/76 (22%) patients as having migraine.

<table>
<thead>
<tr>
<th>Classification by PSI (a)</th>
<th>Read-code classification given by FP (a)</th>
<th>Unclassifiable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migraine</td>
<td>FP-migraine</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>FP-other headache</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Tension headache</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>152</td>
</tr>
<tr>
<td>CDH</td>
<td>17</td>
<td>45</td>
</tr>
<tr>
<td>Other headaches</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Unclassified</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>80</td>
<td>144</td>
</tr>
</tbody>
</table>

Table 1: Comparison between FPs’ diagnosis and criteria-based classification

**Association of criteria-based classification with other patient characteristics**

Table 2 compares the criteria-based classification of patients with migraine and CDH (≥15 days month). Compared to migraine, the CDH group had significantly more headache-related disability, significantly higher scores for anxiety and depression, and were more likely to be dissatisfied with the treatment received from their FP. Compared to migraine, the group with CDH had significantly higher service costs (migraine £115 (sd £156), CDH £164 (sd £194), bootstrapped 95% CI of difference £4 to £97).
Compared to migraine, the group with CDH had significantly higher total costs (migraine £475 (sd £1007), CDH £797 (sd £1438), bootstrapped 95% CI of difference £56 to £680).

<table>
<thead>
<tr>
<th>Specialty diagnosis</th>
<th>CDH</th>
<th>Migraine</th>
<th>Mean difference (£) &amp; P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache disability (NDAS)</td>
<td>12.3(4.3)</td>
<td>18.5(2.6)</td>
<td>15.2 (E&lt;0.01)</td>
</tr>
<tr>
<td>Number of headaches in previous 3 months</td>
<td>55(25.1)</td>
<td>16.0(16.4)</td>
<td>38.9 (E&lt;0.01)</td>
</tr>
<tr>
<td>Severity of pain (1-10)</td>
<td>6.2(2.2)</td>
<td>7.0(2.3)</td>
<td>0.8 (E&lt;0.01)</td>
</tr>
<tr>
<td>Headache impact (HSQ)</td>
<td>62.7(17.9)</td>
<td>66.6(7.4)</td>
<td>0.5 (E&lt;0.01)</td>
</tr>
<tr>
<td>Anxiety (RADS) (R-21)</td>
<td>65.2(18)</td>
<td>72.4(2.2)</td>
<td>13.2 (E&lt;0.01)</td>
</tr>
<tr>
<td>Depression (HADS-D)</td>
<td>5.6(1.4)</td>
<td>4.9(1.6)</td>
<td>1.0 (E&lt;0.01)</td>
</tr>
<tr>
<td>Number of headache-related symptoms</td>
<td>7.7(4.9)</td>
<td>7.9(4.9)</td>
<td>0.2 (E&lt;0.01)</td>
</tr>
<tr>
<td>Satisfied with treatment from FP</td>
<td>14.1(3.3)</td>
<td>18.9(3.1)</td>
<td>4.2 (E&lt;0.01)</td>
</tr>
<tr>
<td>Number of courses of anxiety</td>
<td>27.1(7.7)</td>
<td>36.2(23.7)</td>
<td>9.1 (E&lt;0.01)</td>
</tr>
<tr>
<td>Number of courses of depression</td>
<td>9.1(2.1)</td>
<td>9.0(0.9)</td>
<td>0.1 (E&lt;0.01)</td>
</tr>
</tbody>
</table>

Table 2: Patients' characteristics using criteria-based classification

Discussion

Summary of main findings

Compared to PSI's, FP's appear to underdiagnose migraine. As there were no codes for Chronic Daily Headache (CDH), FP's could not classify headaches in the same way as the PSI. Comparison between patients with migraine and CDH, showed that the group with CDH, reported more disability, more symptoms of anxiety and depression, higher costs and lower satisfaction with care.

Strengths and the limitations of this study

The study has compared a diagnosis recorded by a FP (with the patient present but with the limitations of time and the coding scheme), with classification made by practitioners with extra training and experiences (PSIs) who had access to and used responses to a symptom questionnaire. PSI having access and scoring a symptom questionnaire is clearly a different process from the clinical consultation, which can take account of other features, including FP not having special training, having limited time, and working with a coding scheme which is not designed to be consistent with criteria produced by specialists for academic research. It is possible that FP's gave their patients the optimal treatment irrespective of the Read-code used, assessing this was not the purpose of the study. However, interviews with a sample of the FP's in this study found that lack of clinician confidence and patient pressure were factors which influenced FP's in deciding to refer patients to specialists [4].

Relationship to other studies

In another family practice study, Weindels et al found that compared to patients with less frequent headache episodes, a group with frequent headaches (≥15 days per month) were significantly more likely to have somatic problems, like gastrointestinal and musculoskeletal disorders [18], as well as more psychiatric disorders and medication over-use [19]. Both frequent headache and co-morbidity were associated with lower quality of life [19]. Compared to hospital specialists, FP's potentially have more information about patients' other conditions and their management as a whole. However current diagnostic classification using the Read coding system does not make necessarily alert FP's to linking headache diagnosis with this other clinical information. In this context it is possible that psychological co-morbidity is under-diagnosed or not connected. Prescription of pain medication for headache and co-morbid conditions may contribute to a vicious cycle, with headache and pain symptoms becoming frequent and chronic. Our evidence may increase FP's awareness of frequent headache, and its co-morbidity, and stimulate FP's to identify and manage the co-morbidities of these patients more precisely.

Implications for clinical practice and research

Our results suggest that FP's underuse migraine as a diagnosis. Previous findings suggest that when patients describe a few episodes of headache, they may not include symptoms like unilateral, pulsating pain, or think they have tension headache, and their doctors may not diagnose migraine [12]. Symptom diaries and questionnaires produce a longitudinal picture. FP's do not have a Read-code for CDH, and have more problems managing patients with CDH, because of associated co-morbidity. When we previously analysed and reported the quantitative data, in which this qualitative study was nested, we found a third of patients presenting in family practice were classified as chronic [3]. However when one of us described referrals to a headache clinic, two-thirds had CDH [20]. It is possible that failure to identify and address the disability, psychological morbidity and cost which can be associated with CDH may lead to dissatisfaction among some patients, who then apply pressure for referral to specialists. The read codes need a revision to include CDH because not having this code available limits the FP physician's ability to properly classify patients. If FP's are able to distinguish low from high frequency headache, this may help them to identify and manage the associated disability, psychological co-morbidity and cost associated with headache. Addressing these issues in primary care may have health gains for patients, enhance patient satisfaction, reduce referral, and reduce costs for patients and society [5]. This remains to be evaluated.

References


