Musculoskeletal pain in older adults: the latest musculoskeletal “epidemic”

Musculoskeletal health is often overlooked on the public health agenda. However, thanks to campaign headlines such as “the silent epidemic”, there is now greater awareness of the burden of illness caused by two of the most prevalent musculoskeletal disorders—back pain and osteoporosis. Whole journals, meetings, and learned societies are devoted to the study of these two conditions and major progress has been made towards understanding their cause and appropriate management. The time has now come to give knee pain in older adults the same attention and resources. As shown in table 1, knee pain is more common than back pain in older adults and, with the changing demography in developed countries, this is an epidemic which is destined to grow.

It is likely that some of the lessons learnt from the study of back pain may apply to knee pain. For example, when it comes to assessing healthcare needs it is more useful to focus on the symptom (knee pain) than on the underlying pathology (usually osteoarthritis (OA)). Healthcare needs assessment has a number of well defined steps. Firstly, to estimate the number of people with the condition in the community. Secondly, to evaluate all available interventions. Thirdly, and most difficult, to establish what proportion of cases would benefit from each of the cost effective interventions. This last step requires some understanding of the natural history of knee pain and reliable ways of measuring its severity and the impact which it has on quality of life.

In this issue of the Annals, Peat and colleagues consider the first of these questions: what are the incidence and prevalence of knee pain in the community? (and a supplementary question: what proportion of those with knee pain present to primary care?—a measure of the demand for health care). They conclude that approximately one quarter of people aged more than 55 have had an episode of persistent knee pain (lasting at least one week) in the past year and that, of these, about one in six has consulted his or her general practitioner. Comparisons and syntheses of studies are hampered by the use of varying case definitions. Strangely, the controversy about case definition centres on the duration of pain (most days in the past month, more than a week in the past month, most days for at least a month in the past year) rather than on the severity or impact of the pain. The same debates occur in the field of back pain research, and there it has proved useful to develop the concept of “disabling back pain”. Some population studies of knee pain have incorporated a measure of physical function, but again there is no agreement as to the best measure of disability to use in this setting. Evaluation of interventions (through randomised controlled trials) in musculoskeletal disorders has been greatly facilitated by agreement on core sets of outcome measures (the OMERACT programme). It is perhaps time for those involved in epidemiological studies to agree on “core” case definitions and health status measures for use in population surveys.

Why do so few people with knee pain consult their general practitioners? The assumption in the past has been that knee pain is a symptom of underlying pathology and that those who present to primary care have more severe disease (the biomedical model). However, the association between knee pain and radiographic evidence of OA is poor. In a survey of people aged 40–79 in Nottingham, UK, 37.7% of those with knee pain had no radiographic evidence of OA compared with 58.7% of those without knee pain. In a different study of women aged 45–64, around 50% of those with radiographic knee OA had no pain. However, the prevalence of knee pain does rise with increasing radiographic severity. The risk factors for knee pain and for knee OA are not identical. As with other regional pain syndromes (such as back pain, shoulder pain, and facial pain) the experience of knee pain is determined by a complex interplay between structural damage, peripheral and central pain processing mechanisms, culture, sex, and psychosocial factors. Studies of the relation between psychosocial factors and knee pain are surprisingly scarce and predominantly cross sectional. A study from the north west of England found that the prevalence of knee pain was related to an index of social deprivation. In the US National Health and Nutritional Examination Survey (NHANES-I) psychological wellbeing was found to be associated with knee pain regardless of radiographic findings. As in other types of chronic pain, coping strategies have been shown to be important in determining the level of pain and associated disability in patients with knee OA. It is likely, therefore, that attendance at primary care is driven not only by pain severity but also by psychosocial factors.

Table 1  Crude prevalence of self reported pain (lasting at least one week in the previous month) in residents of Tameside, Greater Manchester, UK (per 100)

<table>
<thead>
<tr>
<th>Joint area</th>
<th>Knee</th>
<th>Back</th>
<th>Neck</th>
<th>Shoulder</th>
<th>Hand</th>
<th>Hip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex/age band</td>
<td>16–44</td>
<td>45–64</td>
<td>65–74</td>
<td>75+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>10</td>
<td>20</td>
<td>12</td>
<td>12</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Men</td>
<td>15</td>
<td>20</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>45–64</td>
<td>21</td>
<td>24</td>
<td>19</td>
<td>12</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>65–74</td>
<td>27</td>
<td>20</td>
<td>17</td>
<td>16</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>75+</td>
<td>27</td>
<td>17</td>
<td>18</td>
<td>20</td>
<td>12</td>
<td>11</td>
</tr>
</tbody>
</table>

From Urwin et al

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Strategies for the management of knee pain also follow the biomedical model, with an emphasis on pharmacological management of pain and surgical intervention. The same is true of research evidence on interventions for knee OA published between 1950 and 1998, with 59% of such studies concerning drugs and 26% concerning surgery.13 Given that, in many cases, knee OA is relatively mild and that patients’ pain and disability often stabilises,14 there is scope for developing management guidelines for use in primary care along the same lines as those developed for back pain.15 These would have an emphasis on self efficacy and a cognitive behavioural approach to pain. They would need to incorporate “red flags”—features which point to serious underlying disease such as severe OA, inflammatory arthritis, or referred pain from the hip or spine and indicate the need for further investigation and specialist advice. However, for such guidelines to be evidence based further research is needed into matching patients with the intervention strategy that is appropriate for them. This will require the development of simple and robust outcome measures, the evaluation of “packages” of interventions already shown individually to be effective, and an assessment of new ways of delivering these packages that are economical and motivate patients to participate. There is clearly much still to be done! The size of the problem of knee pain does justify the investment of considerable research resources and perhaps the founding of societies, meetings, and journals dedicated to reducing the public health impact of this important symptom.

D P M SYMONNS
ARC Epidemiology Unit, University of Manchester Medical School, Oxford Road, Manchester M13 9PT, UK