



Aston Wan

GP pain management: what are the 'Ps' and 'As' of pain management?

Background

Pain is one common reason for clinical encounters in primary care. The complex nature of chronic pain syndromes can make assessment and management daunting at times.

Objective

This article presents an easy scheme to help general practitioners efficiently assess, manage and review/follow up patients with chronic pain.

Discussion

The mnemonic presented for assessment is the '4Ps' (pain, other pathology/past medical history, performance/function and psychological/psychiatric status). For management, we can also use '4Ps' (physical, psychological, pharmacological and procedural) and for review there are the '6As' (activities, analgesia, adverse effects, aberrance behaviours, affects and adequate documentation).

Keywords

general practice; chronic pain

Pain is commonly encountered in primary care. The report published by BEACH (Bettering the Evaluation and Care of Health)¹ stated that musculoskeletal complaints (10.1%), abdominal pain (1.1%), headaches (1.1%), ear pain (0.9%) and non-specific chest pain (0.7%) contribute approximately 14% of all reasons for encounters in general practice in Australia. They reported that at least 11% of chronic problems managed by general practitioners (GPs) are pain conditions. In a survey of health practitioners, predominantly GPs, Upshur² showed that 37.5% of adult appointments in a typical week involved chronic pain complaints. The BEACH report³ also stated that analgesics are among two of the top five most commonly prescribed medications.

The literature shows that GPs have low satisfaction in treating patients with chronic pain and only 34% of primary care physicians felt comfortable in managing these patients.^{2,4} Many GPs feel that they do not have adequate training from their medical school training (82%) or postgraduate general practice training (55%) to manage patients with chronic pain.²

Case study

Joan is a former process worker aged 64 years who has a long history of chronic low back pain after a work-related injury about 14 years ago. She has tried a number of pain medications and antidepressants, as well as an in-patient rehabilitation program but with little success.

Currently, Joan's lower back/sacral area pain radiates to the left hip and buttock area, as well as anterior thigh at times. She complains of occasional paraesthesia at the left medial lower leg as well as the dorsum of her foot. On a visual analogue scale (VAS), this pain has an intensity of 4/10 and is aggravated by walking or physical activity. Joan experiences significant constipation associated with her use of pain medication. Currently, she is taking oxycodone/naloxone 10 mg twice daily and baclofen 5 mg three times a day. The pain interrupts her sleep every night and she has significant fear avoidance, poor activity pacing, significant depressive symptoms and nightmares related to her work injury.

Physical examination revealed abnormal posture with elevated left pelvis. The lumbar range of movement was reduced and there was tenderness on the left sacroiliac joint and the piriformis area.

Signs of sacroiliac joint dysfunction were positive on the left. Neurological examination of the lower limbs was unremarkable.

Joan presented again to her GP who was wondering what can be done for her lower back pain.

This is a unfamiliar scenario in the general practice setting. Very often, patients with chronic pain present with a very protracted complex history including multiple physical illnesses and psychosocial issues. A possible scheme is presented below to analyse these chronic pain scenarios, help GPs assess patients in an organised and logical manner, and plan further action. The emphasis of this article is on using this scheme as a tool and framework for the assessment and management of chronic pain rather than discussing the specifics of a given pain condition (eg. low back pain), which are addressed elsewhere.

The '4Ps' mnemonic for assessment and management is a simple scheme devised by the author through experience in educating GPs and specialist pain medicine trainees, many of whom find this useful, especially when the case is highly complex.

Assesement

The 4Ps for assessment of chronic pain are:

1. **Pain** – the nature of the pain, the possible mechanisms of the pain, possible pathologies that may be causing the pain.
2. **Comorbidities/other Pathologies/Past** medical history – knowledge of the patients' comorbidities and past medical history is very important, as treating comorbidities may improve patients' quality of life and enable more physical and emotional reserves to manage their pain. Moreover, it might affect treatments options for the chronic pain. For instance, for patients with a cardiac comorbidity some medications, such as tricyclic antidepressants, should be used with caution.
3. **Performance/function** – it is important to know the activity level and function of the patients, whether the patients are de-conditioned and whether there are any other activities or pacing issues. It is also worth finding out if there are any indicators of

possible fear avoidance that might reduce the patients' physical and social function.

4. **Psychological/Psychiatric** – assessment of the psychological/psychiatric status, in particular for depression, anxiety and other psychological comorbidity may be helpful. Other issues may also be important and relevant for a particular case.

Application of the 4Ps to the case

1. **Pain** – what is the nature of the left lower back pain? Is it sacroiliac joint pain, lower lumbar facet pain or piriformis syndrome?
2. **Comorbidities/other Pathologies/Past** medical history – chronic constipation
3. **Performance/function** – reduction in function with fear avoidance and poor pacing.
4. **Psychological/psychiatric** – significant depressive symptoms, occasional nightmares and anxiety symptoms. These could indicate post-traumatic stress disorder.

No other important issues were noted in Joan's case.

Management strategies^{5,6}

Persistent pain is a chronic illness. Treatment should focus on management and functional gains rather than treating the pain alone. Long-term elimination of pain is generally unrealistic. An over-emphasis on pain reduction will often result in frustration for the treating doctor and the patient. After a holistic biopsychosocial assessment, a framework of a comprehensive pain management strategy can therefore be planned.

A different set of 4Ps can be used:

1. **Physical** – physical reactivation, including an exercise program, stretching program can be beneficial to chronic pain patients. An appropriately trained physiotherapist or exercise physiologist, who can also provide pain education to reinforce this, would be helpful in these circumstances.
2. **Psychological**⁷ – psychological strategies for pain management may be useful and include pain education, management of poor pacing, fear avoidance, anxiety and stress management. Various techniques, including cognitive behavioural therapy,^{8,9} acceptance-based treatment^{10,11} and mindfulness,^{12,13} are

available. A detailed description of these approaches is beyond the scope of this article and readers are encouraged to refer to articles provided in the Reference section.^{7–13} An appropriately trained psychologist with experience in managing chronic pain patients would be most helpful. Psychiatric review for diagnosis and management may also be required for patients with significant psychiatric comorbidity.

3. **Pharmacological/medications** – It is important to consider if appropriate medication has been used and whether further optimisation of medication is required. Depending on the possible mechanism of the pain, different types of medication could be considered. For example, there are specific medications such as tricyclic antidepressants and gabapentinoids for neuropathic pain, as opposed to non-steroidal anti-inflammatory drugs to treat pain associated with inflammation.
4. **Procedure/intervention** – are there any procedures that may be helpful for this patient (eg. local anaesthetics or corticosteroids injected around the nerve (nerve blocks) or into the joints or operations such as arthroscopy, joint replacement, spinal operation)?

The treating doctor should also provide appropriate pain education. Good communication between the treating doctor and other health providers is paramount in managing most chronic pain. In Joan's case, the following are the pain management strategies:

1. **Physical** – a referral to a chronic pain physiotherapist for appropriate exercises to stabilise the back and the hip area.
2. **Psychological** – a referral to a chronic pain psychologist for stress management techniques and to deal with issues such as fear avoidance and poor activity pacing.
3. **Pharmacological/medication** – no change in medications due to the possible diagnosis of sacroiliac joint dysfunction. Procedural intervention may be helpful (below). Medication use could be reviewed after the procedural intervention.
4. **Procedure/intervention** – referral to a radiologist for a CT-guided left sacroiliac

joints corticosteroid and local anaesthetic injection.

Progress

To assess the progress of management, it is helpful to remember the '6As' recommended by Gourlay et al.¹⁴

- Activities** – it is important to note if there is any improvement in the activity and functional status of the patient after introducing appropriate management strategies.
- Analgesia** – to assess the change in the pain level, a visual analogue scale (VAS)¹⁵, a numeric rating scale (NRS)¹⁵ or questionnaires as such as the brief pain inventory (BPI)^{16,17} can be used.
- Adverse effect** – has the treatment resulted in any adverse reaction?
- Aberrance behaviour** – this is particularly important with the use of opioid medications and some non-opioid medications such as benzodiazepines, which are prescribed for short-term use for acute musculoskeletal pain. It is important to monitor if there are any unsanctioned dose escalations, reported missing scripts, possible inappropriate uses, diversions and possible overuse/overdose.
- Affect** – it is important to note if there is any change of mood in patients with chronic pain. Decisions have to be made as to whether further psychological or psychopharmacological intervention is required.
- Adequate documentation** – this would be required as part of a quality, high standard clinical practice. It is particularly important in risky areas such as opioid use and polypharmacy.

Case continued

After receiving injections of local anaesthetic and corticosteroid into the sacroiliac joints, Joan reported a significant improvement of her low back pain for several weeks. However, the pain was aggravated again. She presented to the GP about 5 months after the injections seeking help for the pain, although she had not attended the recommended physiotherapist and the psychologist sessions.

Table 1. Scheme for assessment, management and follow-up of patients with chronic pain

Assessment '4 Ps'	Management strategies '4 Ps'	Follow-up '6 As'
1. P: Pain	1. P: Physical	1. A: Activities
2. P: Comorbidities/other Pathologies/Past medical history	2. P: Psychological	2. A: Analgesia
3. P: Performance/function	3. P: Pharmacological/medication	3. A: Adverse effects
4. P: Psychological/Psychiatric	4. P: Procedure/intervention	4. A: Aberrance behaviours
(Any other important issues)		5. A: Affect
		6. A: Adequate documentation

On examination, she had significant myofascial tenderness at the left gluteal area and tenderness at the left sacroiliac joint area. A full explanation and education were given regarding the nature of her pain and the important psychosocial barriers to recovery. Local anaesthetic was injected into the left gluteal area to temporarily reduce muscle tension and the localised pain. She was then encouraged to attend the chronic pain physiotherapist, who prescribed appropriate exercise with short-term use of a sacroiliac joint belt. She was also encouraged to see the psychologist to manage her mood, anxiety and stress.

After 2 months, her VAS pain score had decreased from a high level of up to 10/10 to about 2 or 3/10. She was able to have a holiday interstate without much difficulty. She now feels very positive about her outlook and has a better understanding of her comprehensive, multidisciplinary pain management.

Conclusion

In conclusion, although the scheme (*Table 1*) presented does not provide details of the management of individual chronic pain states, it is a useful framework for appropriate analysis and assessment of patients with chronic pain. It broadens their assessment to include biopsychosocial aspects in an organised manner. The management strategy is multidisciplinary and therefore provides the best possible outcome without relying on one single modality of treatment. With this easily memorable scheme for chronic pain assessment and management, GPs can easily analyse chronic pain in their

patients by focusing on the most relevant issues, and will be able to consider other possible management strategies that have not been explored previously. This framework helps to keep the management of patients with chronic pain in focus without being overwhelmed by the complexity of different issues very often present in such patients. It also identifies other appropriate treatment options, which might require referral, for instance, for a surgical procedure or appropriate injections.

Author

Aston Wan MBBCh, MA GDMM, MCI Epid, MPainMed, MHeadacheMed, FRACGP, FFPANZCA, Director of Persistent Pain Service, Princess Alexandra Hospital and Metro South Health, Woolloongabba, QLD. Aston.Wan@health.qld.gov.au

Competing interests: None.

Provenance and peer review: Not commissioned; externally peer reviewed.

References

- Britt H, Charles J, Henderson J, et al. Table 6.3: Distribution of patient reasons for encounter, by ICPC-2 chapter and most frequent individual reasons for encounter within chapter. In: Australian Institute of Health and Welfare. General practice activity in Australia 2007–08. Sydney: Australian Institute of Health and Welfare, 2008, p. 39–40.
- Upshur CC, Luckmann RS, Savageau JA. Primary care provider concerns about management of chronic pain in community clinic populations. *J Gen Intern Med* 2006;21:652–55.
- Britt H, Charles J, Henderson J, et al. Table 6.1: Distribution of prescribed Medications by ATC levels 1, 3 and 5. In: Australian Institute of Health and Welfare. General practice activity in Australia 2007–08. Sydney: Australian Institute of Health and Welfare, p. 61.
- O'Rourke JE, Chen I, Genao I, Panda M, Cykert S. Physicians' comfort in caring for patients with chronic nonmalignant pain. *Am J Med Sci* 2007;333:93–100.

5. Goucke CR. The management of persistent pain. *Medical Journal of Australia* 2003;178:444–47.
6. Guzman J, Esmail R, Karjalainen K, Malmivaara A, Irvin E, Bombardier C. Multidisciplinary rehabilitation for chronic low back pain: systematic review [see comment]. *BMJ*. 2001;322:1511–16.
7. Eccleston C. Role of psychology in pain management. *British Journal of Anaesthesia* 2001;87:144–52.
8. McCracken LM, MacKichan F, Eccleston C. Contextual cognitive-behavioral therapy for severely disabled chronic pain sufferers: Effectiveness and clinically significant change. *European Journal of Pain* 2007;11:314–22.
9. Morley S, Eccleston C, Williams A. Systematic review and meta-analysis of randomized controlled trials of cognitive behaviour therapy and behaviour therapy for chronic pain in adults, excluding headache. *Pain* 1999;80:1–13.
10. Dahl J, Wilson KG, Nilsson A. Acceptance and commitment therapy and the treatment of persons at risk for long-term disability resulting from stress and pain symptoms: A preliminary randomized trial. *Behavior Therapy* 2004;35:785–801.
11. Vowles KE, McCracken LM, O'Brien JZ. Acceptance and values-based action in chronic pain: A three-year follow-up analysis of treatment effectiveness and process. *Behaviour Research and Therapy* 2011;49:748–55.
12. Baer RA. Mindfulness Training as a Clinical Intervention: A Conceptual and Empirical Review. *Clinical Psychology: Science and Practice* 2003;10:125–43.
13. Grossman P, Niemann L, Schmidt S, Walach H. Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research* 2004;57:35–43.
14. Gourlay DL, Heit HA, Almahrezi A. Universal precautions in pain medicine: a rational approach to the treatment of chronic pain. *Pain Medicine* 2005;6:107–12.
15. Huskisson EC. Measurement of pain. *J Rheumatol* 1982;9:768–69.
16. Williamson A, Hoggart B. Pain: a review of three commonly used pain rating scales. *Journal of Clinical Nursing* 2005;14:798–804.
17. Cleeland CS, Ryan KM. Pain assessment: global use of the Brief Pain Inventory. *Annals of the Academy of Medicine, Singapore* 1994;23:129–38.
18. Tan G, Jensen MP, Thornby JI, Shanti BF. Validation of the brief pain inventory for chronic nonmalignant pain. *The Journal of Pain* 2004;5:133–37.

correspondence afp@racgp.org.au