

Biography

Angela Cadogan is a registered Physiotherapy Specialist (Musculoskeletal) with a PhD in Musculoskeletal Diagnostics. Angela is based in Christchurch, New Zealand where she runs her own private practice, working primarily as a consultant providing second opinions on diagnosis and management, as well as rehabilitation for patients with complex shoulder conditions. Angela has an Orthopaedic triage role in the Canterbury District Health Board providing a diagnostic assessment and triage service for people with shoulder pain. Angela is also the Director of Southern Musculoskeletal Seminars, an eLearning business providing clinically relevant online courses on the diagnosis and management of shoulder conditions as well as eLearning courses from other industry leaders in physiotherapy (www.musculoskeletal.courses).

The “D” Word. When Did Diagnosis Become a Dirty Word?

Those of us who work in musculoskeletal practice are increasingly hearing messages such as “diagnosis doesn’t matter”, “diagnosis doesn’t change treatment” and “you can’t make a diagnosis”. Are these statements true? The answer is yes. And no. My specialty area is diagnosis and management of shoulder pain, so I’ll stick to my knitting here and use the shoulder as an example to highlight the definition, role and importance of diagnosis. Although I’m using the shoulder as an example, everything in this article applies equally to all areas of musculoskeletal practice.

What is a diagnosis?

The term diagnosis originates from Greek “dia” (apart) and “gignōskein” (recognize, know).¹ The meaning of the Greek word “diagignōskein” was therefore “discern or distinguish” between conditions with similar presentations. “Diagnosis” is now defined as the determination of the nature of a cause of a disease by evaluation of the signs, symptoms and supportive tests in an individual patient. My impression is that much of the recent ‘anti-diagnosis’ sentiment centers around a poor understanding of the term ‘diagnosis’ often with an underlying assumption that ‘diagnosis’ only refers to a pathoanatomic diagnosis. This criticism is not without grounds in some cases, but there is much more to the diagnostic process than simply a pathoanatomic diagnosis. While there are other cognitive, psychosocial, lifestyle and environmental factors that can influence outcome, a working diagnosis forms the basis of initial decisions made regarding the use of other tests and treatment interventions, or referral to other services.

Why is diagnosis important?

Understanding the nature and cause of a condition (diagnosis) helps by:

- guiding decisions about appropriate treatment and management
- informing prognosis which, in turn, helps calibrate patient expectations about outcomes and timeframes, and guides the frequency and selection of treatment interventions (including physiotherapy)
- providing a context for shared decision-making with the patient regarding treatment options.

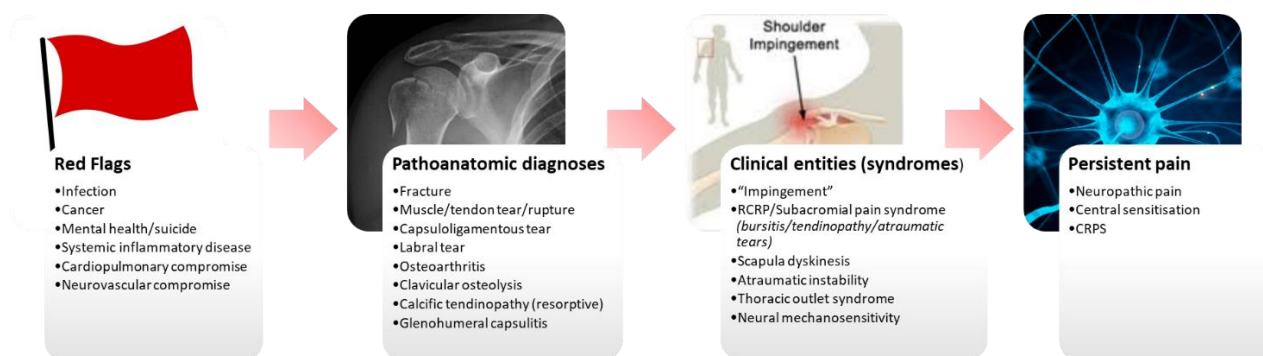
Diagnosis in Musculoskeletal Physiotherapy

In New Zealand, many physiotherapists are primary contact practitioners, meaning patients can seek our care without any prior medical assessment, and many other countries now have direct access to physiotherapy services. Pain is a common symptom driving people to seek healthcare and, as primary contact practitioners, we are responsible for initiating the diagnostic process that aims to identify the ‘nature and cause’ of the patients’ symptoms and get the right person to the right place at the right time to optimize health outcomes.

Pain is associated with a wide variety of medical, musculoskeletal and persistent pain disorders. Working through a diagnostic process is an important first step for any primary contact practitioner to ensure they do not miss important medical and other conditions that require specific management or onward referral.

The most common causes of pain around the shoulder are shown in the diagram. All of these conditions have different causes including medical, peripheral nociceptive, nociplastic or other nervous system dysfunctions. Clearly the treatment for these various causes of pain is very different. Hence, the diagnosis matters.

Figure 1: Causes of shoulder pain



Serious medical conditions

The most commonly missed diagnoses in primary care settings include cancer, infections and cardiovascular disease,² all of which can present with symptoms in the shoulder girdle region. The assessment of health risk factors, atypical symptoms and signs, involvement of other body systems and assessment of the response to previous treatment may help identify red flag indicators of serious pathology that require medical follow-up.³

Pathoanatomic diagnoses

Specific diagnoses exist for which there is an identifiable pathoanatomic lesion or process that requires specific types of management. Traumatic injuries such as fractures, muscle or tendon ruptures and some degenerative conditions such as advanced osteoarthritis require surgical management in order to achieve an optimal functional outcome.

Specific pathoanatomic diagnoses also have implications for physiotherapy rehabilitation where tissue healing times and loading progressions need to be managed according to the specific tissues involved. For example, in a person with a degenerative, symptomatic full thickness supraspinatus tear, it would be sensible to avoid placing high forces through the already compromised rotator cuff to reduce the risk of tear progression.

Traumatic structural shoulder injuries (pathoanatomic diagnoses) that may require early orthopaedic review and possible surgical management include:

- fractures around the shoulder girdle (clavicle, scapula and humerus).
- traumatic instability lesions (fractures, capsuloligamentous avulsions or displaced labral tears),
- acute rotator cuff tears (especially isolated subscapularis tears)
- pectoralis major ruptures

Clinical tests for most of these conditions lack sufficient specificity to make an accurate diagnosis and imaging is often required to confirm (or exclude) these conditions. Significant trauma, severe pain and significant weakness (associated with trauma) should prompt a referral for imaging to ensure important

conditions are not missed. If the diagnosis of conditions such as a traumatic, complete tear of subscapularis is delayed or missed, the surgical window of opportunity for repair may also be missed leading to poorer outcomes.

In atraumatic shoulder conditions, specific pathologic processes can often influence treatment decisions and prognostic outcomes including:

- frozen shoulder
- glenohumeral osteoarthritis
- acute resorptive calcific tendinopathy
- clavicular osteolysis

Conditions such as osteoarthritis have a specific management pathway (often surgery) and a different prognosis compared with frozen shoulder that has a favourable natural history in many cases. Differentiating glenohumeral osteoarthritis from frozen shoulder (both present with loss of passive motion) is therefore important to guide referral, management and patient expectations for recovery. Where a specific pathology is suspected that will alter management or prognosis, imaging can be useful to confirm or exclude these conditions.

Clinical entities (syndromes)

Clinical entities are a group of conditions that are generally labelled according to a description of symptoms or impairments in the absence of a clear, or clinically important pathoanatomic diagnosis. In other words, the symptoms or impairments are not attributable to an identifiable pathoanatomic lesion, and to do so would not alter management. Some examples of these include:

- Impingement symptoms
- Rotator cuff related pain
- Scapula dyskinesia
- Neural mechanosensitivity

Management in these cases is almost always non-surgical. Having a pathoanatomic diagnosis for these conditions is therefore of very limited value as it does not help make decisions about specific treatments. Many treatment-based classification systems exist to help guide treatment for these conditions that are based upon irritability, symptom modification, addressing specific impairments and other factors that may influence outcome. ⁴⁻⁸

Persistent Pain

In a small proportion people with shoulder symptoms, the persistence of pain is not explained by ongoing peripheral nociceptive causes and may be due to dysfunction of the central nervous system and associated structures causing neuropathic pain, nociplastic pain (e.g central sensitization) or complex regional pain syndrome. This can be a complex group to manage, generally requiring multidisciplinary team approach with assessment and input from appropriately trained health professionals.

Diagnostic uncertainty

For some people, it may not be possible to identify a specific cause (diagnosis) of their symptoms. That is ok. What is important however, is that you have worked through a diagnostic process to exclude serious medical conditions and identify important pathoanatomic diagnoses or persistent pain conditions that may need specialist onward referral for specialist management.

Overmedicalisation

Identifying specific conditions that require specific management is important in achieving optimal outcomes. However, we must be careful not to overmedicalize other conditions. “Over-medicalisation” includes:

- over-detection (e.g too much use of imaging identifying asymptomatic pathology)
- over-diagnosis (turning impairments into a ‘diagnosis’ e.g scapula dyskinesia)
- over-treatment and over-utilization of healthcare resources (e.g too many physiotherapy visits or unnecessary orthopaedic referrals).

While there are other biomedical, psychosocial, lifestyle and environmental factors that can exert a powerful influence on outcomes, an understanding of the nature and cause of symptoms helps provide an important start point and trajectory for treatment that helps achieve optimal outcomes for specific conditions.

Does diagnosis matter? Does diagnosis change treatment? I’ll let you decide.

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