

Shoulder Pain in the Urgent Care

Urgent message: Shoulder pain is not always “just another musculoskeletal complaint.” It may be referred pain indicating life-threatening conditions. Many patients use urgent care centers as sources of primary care. Thus when we make an important diagnosis because of our methodical, stepwise approach to examination, we have the opportunity to be the providers who ultimately expedite diagnosis and care for these patients.

MIZUHO SPANGLER, DO, and MICHAEL B. WEINSTOCK, MD

Shoulder pain is the third most common musculoskeletal complaint seen in outpatient clinics in the United States, with more than 14.7 cases per 1000 persons reported each year.¹ The most common causes of shoulder pain are trauma or overuse injuries involving the rotator cuff or within the glenohumeral joint itself.^{1,2}

Although in the vast majority of patients who present to urgent care centers for shoulder pain there is an underlying musculoskeletal etiology, we as clinicians must recognize that there are many potentially catastrophic diagnoses that can present as referred pain to the shoulder, including myocardial infarction, aortic dissection, hemoperitoneum from solid organ injury, and even a ruptured ectopic pregnancy. Thus, it is critical that we rapidly exclude life-threatening causes of

Mizuho Spangler, DO, is Assistant Professor of Clinical Emergency Medicine, Keck School of Medicine, LAC+USC Medical Center Department of Emergency Medicine, Los Angeles, California, and Executive Editor, Audio CME Program, *Urgent Care: Reviews and Perspectives (UC:RAP)*.

Michael B. Weinstock, MD, is Associate Clinical Editor for *JUCM*; Adjunct Professor of Emergency Medicine, Department of Emergency Medicine, Ohio State University College of Medicine; Chairman and Director of Medical Education, Mount Carmel St. Ann’s Hospital Department of Emergency Medicine, Columbus, Ohio, Immediate Health Associates, Inc.; and Editor-in-Chief, *UC:RAP*.



©Phototake.com

shoulder pain before proceeding with further diagnostic workups.

Having a methodical approach to the evaluation of

shoulder pain is vital because it not only creates structure and organization for the broad differential diagnostic possibilities but also enables health-care providers to quickly and efficiently ascertain the likely underlying problem. The practical stepwise method discussed here will allow you to quickly obtain a pertinent medical history and perform a focused physical examination. We then further narrow down the diagnostic possibilities by differentiating between traumatic and nontraumatic causes, infectious from inflammatory, acute from subacute, and so on, each step eliminating potential extrinsic causes of pain. Last, we explore the possible organic causes of pain arising from the glenohumeral joint itself or from the surrounding extra-glenohumeral structures. Although the anatomic accuracy in our diagnosis is not vital, what is important is the exclusion of life-threatening and limb-threatening causes of pain. Not only does this stepwise method improve diagnostic accuracy and limit risk to both the patient and the provider, but it also enables you to provide the best treatment modalities and final referral recommendations in your practice.

Consider the following clinical scenarios:

- **Case 1:** A 52-year-old construction worker presents with left shoulder pain that started while he was loading a heavy piece of equipment into his truck. He tried resting and icing his shoulder, but this did not provide relief; his pain is intermittent. He was brought to the urgent care center by his wife after he returned home and developed diaphoresis.
- **Case 2:** A 21-year-old woman with no significant past medical history presents with sudden onset of right shoulder pain that started abruptly this morning. She has no history of trauma. She states that she had some menstrual-like cramping in her abdomen the previous night, but she cannot recall the date of her last menstrual period. She is otherwise healthy.
- **Case 3:** A 75-year-old man with a history of chronic obstructive pulmonary disease presents with chronic left shoulder pain. Your findings on his musculoskeletal examination are unremarkable. There is no history of trauma. On further questioning, he reports having had an intermittent cough, unintentional weight loss, and night sweats for more than 1 year.
- **Case 4:** A 28-year-old right-handed tennis player with a history of shoulder injuries presents with gradual onset of weakness in his right shoulder. He reports having difficulty serving the ball during tennis games.

We will use these 4 cases as a framework for discussing the evaluation of shoulder pain.

Anatomy

The scapula, clavicle, proximal humerus, and its articulation in the glenoid fossa comprise the shoulder girdle. The shoulder girdle involves 4 joints:

- The sternoclavicular joint
- The acromioclavicular (AC) joint
- The scapulothoracic joint
- The glenohumeral joint

Both the sternoclavicular and AC joints are smaller fibrocartilaginous joints that provide anchoring to the axial skeleton. The glenohumeral joint is a ball-and-socket joint that is cushioned within the glenoid fossa by a capsule, and this articulation is what we commonly refer to as the shoulder joint.

The shoulder joint has the largest range of motion of any joint in the body, with impressive degrees of flexion, extension, abduction, adduction, circumduction, and rotation of the upper extremities. However, this mobility compromises its stability, making it vulnerable to injury.²⁻⁴

The glenohumeral joint is held together by a complex matrix of ligaments, tendons, muscles, and fascia. Most notable are the tendons of the rotator cuff muscles: the supraspinatus, infraspinatus, teres minor, and subscapularis, collectively referred to as the SITS muscles. The interworking muscles, ligaments, and tendons all function together as a kinetic chain, and thus dysfunction in one area can cause pathology in another.⁵

Musculoskeletal or Not?

When evaluating any patient presenting with shoulder pain, first determine whether the patient appears clinically stable or unstable. Even though musculoskeletal shoulder pain can cause significant pain and disability, consider whether the patient appears pale, diaphoretic, or presyncopal. Does their degree of pain correlate with the mechanism of injury, or does it seem out of proportion? It is important to avoid going down the pathway of diagnosis momentum, making sure instead to carefully consider potentially life-threatening etiologies of pain.

Clinical Red Flags to Consider

If your patient has any of these red flags, consider immediate transfer to an emergency department.

- **Acute nontraumatic pain:** Sudden onset of pain

without a history of trauma is worrisome. Referred pain to the shoulder can occur because of myocardial infarction, diaphragmatic irritation from a ruptured ectopic pregnancy, splenic hematoma, subphrenic abscess, or other life-threatening concerns.^{2,3}

- **Any neurovascular compromise:** Beware of paresthesias or weakness in the extremities or any focal findings that might raise your suspicion that this is not simply musculoskeletal.
- **Traumatic open wound:** Patients may not be willing to disclose a wound sustained during an argument, assault, or arrest, and thus it is important to perform a thorough examination with the patient disrobed above the waist.
- **Unstable vital signs:** Hypotension and tachycardia are particularly worrisome.
- **Abnormal electrocardiogram (ECG) findings**
- **Pregnancy:** Positive findings on a pregnancy test should always give you pause and cause you to consider a ruptured ectopic pregnancy in the differential diagnosis, particularly if there is concomitant pelvic pain, vaginal bleeding, and no history of a confirmed intrauterine pregnancy on previous imaging.

History of Present Illness

After excluding imminently life-threatening causes of pain, we can then confidently proceed to obtaining a more focused medical history to further narrow down the differential diagnoses. Important questions to help you delineate intrinsic from extrinsic causes include the following:

- Is the pain acute or chronic?
 - Acute: what, where, why, and when did the patient notice the pain?
 - Chronic: How long? Any previous injuries? Overuse injuries? Occupational injury? Sports injury?
- Is the pain traumatic or nontraumatic?
- What are the quality and character of the pain?
 - Is it a dull pressure sensation that is regional and exertional, felt across the chest and shoulder? Get an ECG.
 - Is it sharp pain that feels like it is tearing from the scapula to the shoulder? Consider aortic dissection.
 - Are there any other areas of the body that are also painful at about the same time?
- Does pain occur at rest, or does it occur with movement? Which movement exacerbates the pain?
- Is the pain aggravated or alleviated by anything?

- Are there any concerning associated symptoms such as fever, redness, warmth, abdominal pain, or back pain?

Past Medical History

It is also important to consider the patient's past medical history and surgical history.

- Social history: occupation, activities or sports (tennis, football, golf), use of musical instruments
- Smoking, alcohol abuse, illicit drug abuse
- Previous trauma
- Previous injuries or surgeries
- Medications taken
- Comorbidities (diabetes mellitus, myasthenia gravis, rheumatoid arthritis)
- Date of last menstrual period

Physical Examination

The physical examination is best performed using a stepwise methodical approach to avoid missing pitfalls. It is easy to be distracted by an impressive abrasion or laceration to the shoulder and miss a devastating underlying neurovascular injury if the examination procedure is not an established routine. The following is a careful, focused approach to the physical examination that can be performed at the bedside in minutes:

1. **Inspection:** The shoulder should be evaluated first, with inspection from all directions—anteriorly, posteriorly, and laterally—to look for asymmetry or deformity along the shoulder girdle.³ Using the opposite shoulder as a comparison is always helpful. It is important to note any skin changes (lacerations, abrasions, erythema, ecchymosis) and asymmetry due to soft-tissue swelling, hematomas, or obvious bony deformities. An “empty sulcus sign” is typically seen with shoulder dislocation.
2. **Palpate:** Next, it is important to use your tactile skills to feel for focal tenderness, crepitus, warmth, or edema. Location of maximal pain may assist in diagnosis.
3. **Range of motion:** It is important to evaluate patients using both active and passive range-of-motion testing to determine areas of limitation and to rule out dislocation. Noting limitations to the degree of motion in comparison with the unaffected side can help isolate the problem area.^{2,3} Active range-of-motion testing should ideally be performed with the patient in a seated position to eliminate contributions of other large muscle groups that could alter your examination findings.³ Severe pain

Table 1. Important Extrinsic Causes of Acute Shoulder Pain	
System	Diagnosis
Cardiac	Acute coronary syndrome
	Pulmonary embolism
	Thoracic aortic dissection
	Myocarditis
	Cardiac tamponade
Pulmonary	Pneumothorax
	Pneumonia
	Masses or tumor
	Thoracic outlet syndrome
	Pleural effusion
Abdominal	Any intra-abdominal hemorrhage from liver or spleen lacerations, or ruptured ectopic pregnancy
	Abdominal aortic aneurysm
	Gallbladder, pancreas, or gastric disease
	Renal colic
	Splenic hematoma
	Subphrenic abscess
Neurologic	Cervical spine injury
	Nerve impingement
	Cerebrovascular accident
	Transient ischemic attack
Infectious	Herpes zoster
	Cellulitis
	Necrotizing fasciitis

with micromotion or reluctance to move the joint at all is a clinical red flag for a septic joint.

4. Neurovascular: Performing a thorough sensorimotor examination is vital. Begin by evaluating the dermatomes along C5–T1 with light touch and pinprick sensory testing. Each of these dermatomes correlates to the associated nerve root of the brachial plexus and can help isolate damage. C5 and C6 can be tested along the lateral arm and forearm, respectively. C7 and C8 correlate to the tips of the middle and little fingers, respectively, and C8–T1 tests the medial forearm and arm. The trapezius, deltoid, biceps, thumb extensors, finger flexors, and interossei muscles should all be included in motor-strength testing, comparing suspected weakness with the strength of the contralateral side.^{2,3}

For proper vascular evaluation, assessment of the brachial, radial, and ulnar pulses is in order. If there is evidence of a weak pulse, expanding hematomas, pallor, or cool extremities, your suspicion for a serious vascular injury should be very high, warranting immediate transfer of the patient to an emergency department for further evaluation with computed tomography angiography and for vascular surgery consultation.

Stepwise Methodical Approach

After gaining significant information from the pertinent history and a thorough and focused physical examination, we can finally proceed to the following 4-step approach to determine the most likely cause of pain.⁵

Step 1: Traumatic Versus Nontraumatic History

When there is an acute traumatic history for the present condition, plain radiographs (x-rays) can eliminate both benign and worrisome traumatic diagnoses⁵:

- Clavicle fracture (medial,* middle, lateral)
- Proximal humerus fracture
- Glenohumeral joint dislocation (anterior most common; posterior*)
- AC joint separation
- Sternoclavicular joint separation*
- Scapular fracture* (usually due to high impact and associated with concomitant injuries)

Note: Diagnoses marked with an asterisk (*) are considered serious injuries with a high likelihood of concomitant injuries because of the force required to cause fracture at these sites. They almost always warrant further workup and possibly subspecialty consultation. These patients should be stabilized, the joint should be immobilized, and the patient should be transferred immediately to an emergency department.

For glenohumeral concerns, a three-view shoulder series (including anteroposterior, lateral, and axillary views) is recommended. If the pain is localized to extra-articular areas, consider obtaining plain films of the clavicle, sternum, or the chest.

If the diagnosis is elusive after review of plain radiographic films, proceed to step 2.

Step 2: Intrinsic Versus Extrinsic Pain

Determining whether the shoulder pain is originating

intrinsically from the shoulder or instead from an extrinsic location is likely the most important step.⁵ The list of extrinsic causes can be extensive; however, important ones to consider are noted in Table 1.

Most extrinsic causes of shoulder pain can easily be eliminated by the medical history and physical examination findings. If these life-threatening or limb-threatening causes of extrinsic disease are ruled out and you believe the etiology of pain is intrinsic to the shoulder itself, then proceed to step 3.

Step 3: Extra-glenohumeral Versus Glenohumeral Cause

The extra-glenohumeral causes of shoulder pain are typically easier to diagnose or exclude, so we review them first.⁵

Extra-glenohumeral Causes

- **Biceps tendinitis or tear:** Pain is usually localized to the anterolateral shoulder and radiates down the ipsilateral arm. It is typically aggravated with any overhead activity, and at night.
 - **Maneuvers:**
 - **Yergason test** (where the elbow is flexed at 90° and the forearm is supinated against resistance)²
 - **Speed test** (with the shoulder flexed at 90° and the elbow in extension, the forearm is supinated against resistance)²
 - **Treatment:**
 - Rest
 - Ice
 - Nonsteroidal anti-inflammatory drugs (NSAIDs)
 - A sling for comfort
 - Referral to an orthopedic surgeon
- **AC joint osteoarthritis:** The AC joint itself is a complex matrix of capsular and extracapsular ligaments that help secure it to the surrounding muscular structures.²⁻⁴ This joint is vulnerable to osteoarthritis caused by aging and degeneration of the AC joint or by prior trauma.
- **Scapulothoracic bursitis:** Irritation and inflammation of the bursa underlying the scapula and overlying adjacent ribs. Patients complain of a painful popping sensation behind their shoulder blade that is made worse with any overhead movement.^{6,7} Pain can be elicited with palpation posterior to the scapula. Treatment is conservative: NSAIDs and referral to the patient's primary-care physician.

Glenohumeral Causes

Intrinsic glenohumeral causes of shoulder pain can be somewhat more difficult to differentiate and require a little more thought.⁵

- **Glenohumeral septic arthritis:** This usually results from hematogenous spread and manifests clinically with erythema, warmth, joint fullness (effusion), and severe pain with even the smallest micromotion. Transport for emergency arthrocentesis and intravenous antibiotics should be arranged.
- **Glenohumeral osteoarthritis:** Much like the AC joint, the gleno-

NATIONAL JANITORIAL SOLUTIONS

National Janitorial Solutions, a leading U.S. provider of janitorial, floor care, and window services, delivers high quality services to Urgent Care Centers and has been servicing the healthcare industry for over 11 years. In our 30 year operation, NJS has designed customized scopes of work tailored specifically to meet our Clients' brand images and needs. Our specialists provide a comprehensive service offering to achieve total satisfaction.

Comprehensive Service Offering:

Janitorial Services
Floor Care / Carpets
Rest Room Detailing
Window and Pressure Washing
High Dusting

Advanced Technologies:

Low Moisture Carpet Cleaning
Carpet Encapsulation
The Science of Dirt

Did You Know:

The Cost of Janitorial is Just
A Fraction of the Patient Co-Pay?
First Impressions Impact
Patient Visits?

*The best single source solution
for all janitorial and floor care needs*

 **NJS**
NATIONAL JANITORIAL SOLUTIONS
Boutique Care. Nationwide Performance.™

14000 Commerce Parkway, Suite D
Mount Laurel, New Jersey 08054
(877) 227-6374
www.natjan.com

humeral joint is also predisposed to arthritic changes. Although glenohumeral arthritis predominantly occurs in elderly patients, it can occur in younger patients who have sustained repetitive injuries to the joint because of dislocations or direct trauma. A trial of NSAIDs, a sling for comfort, and a referral for physical therapy and rehabilitation are recommended.

- **Shoulder impingement syndrome:** Patients can develop impingement syndromes for 2 reasons: (1) an increase in the volume of structures (muscle hypertrophy or inflammation) or (2) decreased available space within the joint due to osteophyte formation, fibrous tissue buildup, or anatomic derangements. Patients classically experience pain at night and often describe it as feeling like a toothache within the shoulder.⁴ Impingement can be clinically diagnosed with positive findings for the Neer sign (pain upon forcible flexion of the arm) or the impingement test (10 mL of 1% lidocaine is injected into the subacromial space, and the Neer maneuver is repeated).²⁻⁴ If there is relief of pain after injection, this suggests impingement. Treatment involves rest, NSAIDs, avoidance of overhead motion, and alternating shoulder exercises.
- **Subacromial bursitis:** This is inflammation of the bursa in response to irritation from the surrounding structures, commonly associated with impingement syndrome.³ On examination, abduction of the arm to 70° to 100° will elicit pain in the lateral shoulder. It may be difficult to distinguish subacromial bursitis from impingement syndrome; however, the treatment is the same: conservative with NSAIDs and referral.
- **Rotator cuff tear and tendinopathy:** These conditions are commonly seen in athletes with a history of repetitive overhead throwing (as in baseball or tennis) or in general populations of persons older than 40 years. Rotator cuff tendinopathy and tears lie along the same spectrum of disease. Patients with these conditions present with marked pain and inability to abduct the upper extremity.
 - **Drop arm test:** Findings are positive if the arm is passively abducted and the patient cannot actively hold it up against gravity.

“Seen most commonly in patients with diabetes and in middle-aged women, frozen shoulder is thought to be due to prolonged periods of shoulder immobilization and to lack of activity.”

scapula. Findings are positive if the patient is not able to do so.²⁻⁴

Treatment in the urgent care center is the same for tears and tendinopathy and involves ice, NSAIDs, and referral to physical therapy for rehabilitation in 1 to 2 weeks.

- **Adhesive capsulitis (frozen shoulder):** This condition results from capsular thickening and contraction of the glenohumeral joint, limiting mobility. On examination, patients will demonstrate a very limited range of motion both passively and actively in all directions, particularly in abduction. Seen most commonly in patients with diabetes and in middle-aged women, frozen shoulder is thought to be due to prolonged periods of shoulder immobilization and to lack of activity.²⁻⁴ Treatment is aimed at alternating shoulder exercises with rest, use of NSAIDs, and referral to rehabilitation and orthopedics.
- **Glenohumeral instability and dislocations:** Shoulder instability is a relatively common problem and can present in varying degrees of severity, from mild subluxation all the way to a complete dislocation of the glenohumeral joint. Although glenohumeral instability most commonly occurs in athletes with overhead trauma, it can also occur in nonathletes with repetitive microtrauma. Anterior instability is the most common (95%) type of instability; however, dislocations of the glenohumeral joint can occur in 4 directions: anterior, posterior, inferior (luxatio erecta), and superior.²⁻⁴ All dislocations require an immediate neurovascular examination with particular attention to the axillary nerve innervation along the lateral aspect of the upper arm.
- **Anterior dislocations:** On examination, patients with anterior dislocations will have an abducted, externally rotated arm. They will be unable to cross their chest with the affected arm to touch their con-

- **The supraspinatus test:** The patient abducts the arm to 90°, and the examiner applies a downward force against the arm while having the patient attempt to resist the force and maintain position.

- **Apley scratch test:** The patient attempts to touch the superior and inferior aspects of the contralateral

tralateral shoulder. They may demonstrate positive findings on the apprehension test, which is the most sensitive special test for detecting shoulder instability. Placing the patient in a supine position, the examiner places anterior force on the humerus with external rotation. Apprehension (i.e., pain) with a sensation of subluxation is considered a positive finding.^{2,4}

- **Posterior instability:** Patients with posterior instability present with a flexed, adducted, and internally rotated arm that they are unable to externally rotate.²⁻⁴ They may have positive findings for the sulcus sign: In a seated position, the examiner places downward traction on the arm, creating a sulcus between the humerus and acromion.

Select patients with acute anterior shoulder dislocations can potentially undergo closed reduction performed by urgent care clinicians trained and experienced with shoulder-reduction techniques that do not require anesthesia. However, other clinicians may prefer to defer to the emergency department for further case management. This decision is best left to the clinician's discretion and is based on clinician preference, the patient's comorbidities, the patient's ability to cooperate with reduction with minimal anesthesia, acuity of dislocation, and other practical concerns.

Clinical Correlations Advised

Case 1

This case involved a 52-year-old construction worker who presented with left shoulder pain that started while he was loading a heavy piece of equipment into his truck. He tried resting and icing his shoulder but could not obtain relief for his intermittent pain. His wife took him to the urgent care center because she noted that his pain had significantly worsened and that he was diaphoretic and nauseated at home.

There are a number of red flags in this medical history, and your examination findings are relatively unremarkable. You apply the stepwise approach⁵:

- **Step 1: traumatic or nontraumatic?** The fact that this patient's pain began with exertion but without clear trauma is concerning. Although it is quite possible that he strained his rotator cuff, the fact that his pain comes and goes and is now worse with exertion is a red flag. Furthermore, the benign findings on his musculoskeletal examination do not directly correlate to any obvious intrinsic causes.
- **Step 2: intrinsic or extrinsic?** Given the red flags that the patient's history provides, you astutely

obtain an ECG before proceeding to step 3. The ECG demonstrates concerning evidence of acute myocardial infarction. Before proceeding with the rest of your urgent care workup, you determine that an acute coronary syndrome must first be ruled out, and you appropriately give him an aspirin while your staff arranges transport to an emergency department.

Case 2

This case involved a 21-year-old woman with no significant past medical history who presented with right shoulder pain that suddenly began 1 hour prior to her arrival at the urgent care center. She had no history of trauma. She stated that she had some menstrual-like cramping in her abdomen the preceding night, but she could not recall the date of her last menstrual period. She is otherwise healthy.

- **Step 1: traumatic or nontraumatic?** The patient has no history of trauma; however, you are concerned with her overall clinical appearance. She does not appear to be in an unstable condition, but she looks pale. While you wait for her vital signs and before you examine her, you ask your staff to perform a bedside test for urine level of human chorionic gonadotropin. Walking back from the bathroom, the patient has a syncopal episode. She is now hypotensive, and her pregnancy test is quickly done, with positive results.
- **Step 2: intrinsic or extrinsic?** Your clinical gestalt that the patient's appearance was a bit concerning was accurate, and she is now clinically unstable. You rush to examine her. Your findings on examination of her shoulder are unremarkable, yet her abdomen is tense, tender, and diffusely peritoneal. You are strongly suspicious that a ruptured ectopic pregnancy is causing intra-abdominal hemorrhage. The blood within the peritoneum has caused irritation along the diaphragm, causing referred pain to the shoulder. Given this possibly life-threatening extrinsic cause, you stop at this step and call 911. Given her hypotensive, unstable state, you also transfer her care to the accepting emergency department physician and make clear your concerns about hemorrhagic shock due to a ruptured ectopic pregnancy. The emergency physician consults the obstetrician before the patient arrives, and the patient is appropriately taken to an operating room minutes after arrival. Using the intrinsic-versus-extrinsic approach allowed you to recognize red flags first, which saves the patient's life.

Case 3

This case involved a 75-year-old man with a history of chronic obstructive pulmonary disease for more than 1 year who presented with chronic left shoulder pain. When you obtained further details of his medical history, you found that the patient has had an intermittent cough, unintentional weight loss, and night sweats for over 1 year. You move on to a focused physical examination, finding nothing remarkable on inspection, palpation, a check for range of motion, or neurovascular evaluation. He has no red flags in his history thus far, so it is appropriate to proceed with the following steps:

- **Step 1: traumatic or nontraumatic?** His pain is not caused by trauma.
- **Step 2: intrinsic or extrinsic?** At this point, you are still unsure. Components in his presentation that bother you include a chronic cough, weight loss, and night sweats. These components, together with unremarkable examination findings, prompt you to obtain a chest x-ray. While you wait for his radiographs, you proceed to step 3.
- **Step 3: glenohumeral or extra-glenohumeral?** Findings on his detailed shoulder examination are confirmed to be normal. You can exclude all glenohumeral causes. You examine the chest x-ray and note a large left apical mass. Given his otherwise normal examination findings, his pain is likely extrinsic, referred from the mass. After reassuring him and stressing the importance of close follow-up, you appropriately advise him to promptly see his primary-care physician the following morning, and the patient is subsequently referred to oncology.

This case illuminates an important point: Although the diagnosis of a new lung mass is not a typical urgent care diagnosis, nor is it expected in the urgent care setting, urgent care clinicians are often first-line health-care providers. Many patients use urgent care centers as sources of primary care. Thus when we recognize important clinical red flags (e.g., chronic cough, weight loss, and night sweats) because of our methodical approach to examination, we have the opportunity to be the providers who ultimately expedite diagnosis and care for these patients.

Case 4

This case involved a 28-year-old right-handed tennis player with a history of shoulder injuries who presented with gradual-onset weakness in his right shoulder. He reported having difficulty serving the ball during tennis games.

- **Step 1: traumatic or nontraumatic?** The patient cannot recall a recent acute traumatic injury. When you obtain further history, he reports playing tennis 5 days a week, which heightens your suspicion for overuse injury due to microtrauma. You continue your evaluation.
- **Step 2: intrinsic or extrinsic?** After reviewing a long list of potential extrinsic causes, you find that the patient has no evidence of infectious, cardiac, pulmonary, abdominal, or neurologic red flags that would explain his discomfort.
- **Step 3: glenohumeral or extra-glenohumeral?** A focused physical examination demonstrates marked pain within the right glenohumeral joint itself. You perform special tests to further elucidate limitations in range of motion of his affected arm. You find that he has difficulty abducting the upper extremity and cannot actively hold it up or against resistance, confirming a positive finding on the drop arm test. You now strongly suspect a rotator cuff tear, and in view of the patient's medical history and your findings on physical examination, this diagnosis seems likely. He has no apparent life-threatening or limb-threatening issues. You administer an intramuscular injection of an NSAID, provide appropriate rest instructions, and treat him with a temporary sling. You advise him to see his primary-care physician for magnetic resonance imaging, and he subsequently is referred to an orthopedic surgeon for rotator cuff repair.

Conclusion

In all of these clinical cases, the patients benefited from the use of our stepwise approach to the evaluation of shoulder pain in the urgent care setting. First, potentially life-threatening causes of extrinsic shoulder pain must be quickly eliminated. This can be achieved at the bedside by obtaining a thorough medical history and performing a focused, structured physical examination. Any red flags encountered in the history or examination should trigger an expedited order for workups that will either support or disprove your suspicion, such as ECG to detect an acute coronary syndrome or a urine pregnancy test to rule out an ectopic pregnancy.

Without notable red flags for concerning extrinsic causes of shoulder pain, we can then proceed in a stepwise fashion to further narrow down the diagnostic possibilities. Differentiating traumatic from nontraumatic causes is the initial step. The next step is narrowing down these possibilities even further by deciphering

whether the cause is intrinsic versus extrinsic and then, finally, glenohumeral versus extra-glenohumeral. Obtaining the exact anatomic diagnosis in the urgent care setting should not be our primary goal. What matters most is excluding life-threatening causes, and then appropriately addressing pain and giving exercise instructions or rest recommendations, and finally arranging for follow-up care and providing referrals.

Finally, remember that despite our prompt turn-around efforts, we are often the first or only providers of health care for patients. Because of poor access to health care, many patients rely on urgent care centers as their point of entry. We are not expected to be comprehensive in our workup, nor are we required to diagnose obscure and rare diseases. However, seizing the unique opportunity that urgent care offers to make a life-changing difference in our patients' lives is rewarding. Before you reflexively give a musculoskeletal-oriented diagnosis and treatment plan to your next patient with shoulder pain, take a moment to stop and consider the stepwise methodical approach described here. Using it may make the difference between life and death. ■

References

1. Cadogan A, Laslett M, Hing WA, et al. A prospective study of shoulder pain in primary care: prevalence of imaged pathology and response to guided diagnostic blocks. *BMC Musculoskeletal Disorders*. 2011;12:119.
2. Zapalac S, Richmond M, Henderson SO. Orthopedic emergencies. In: Henderson SO, ed. *Emergency Medicine (Vademecum)*. Georgetown, Texas: Landes Bioscience; 2006:200–208.
3. Daya M, Nakamura Y. Shoulder. In: Marx J, Hockberger R, Walls R, eds. *Rosen's Emergency Medicine Concepts and Clinical Practice*, 7th edition. Philadelphia, Pennsylvania: Mosby; 2010:567–590.
4. DiOrio D, Riedlinger S. Shoulder injuries. In: Weinstock MB, Neides DM, Chan M, eds. *The Resident's Guide to Ambulatory Care*. 7th edition. Columbus, Ohio: Anadem Publishing; 2015: 359–361.
5. Tollefson B, Spangler M, Herbert M. MizuhoFiles—approach to shoulder pain. *Emergency Medicine: Reviews and Perspectives (EM:RAP)* May 2014. Available from: <https://www.emrap.org/episode/2014/may/mizuhofiles>
6. Schmitt L, Snyder-Mackler L. Role of scapular stabilizers in etiology and treatment of impingement syndrome. *J Orthop Sports Phys Ther*. 1999;29:38–38.
7. Conduah AH, Baker CL 3rd, Baker CL Jr. Clinical management of scapulothoracic bursitis and the snapping scapula. *Sports Health*. 2010;2:147–155.

Find Your New Job TODAY!



FREE Online Job Board:

JUCM'S CareerCenter is a FREE Online Job Board and job search tool where job seekers can:

- Receive New Jobs Via Email
- Apply Online
- Save Jobs
- Upload your Resume

Start searching at:
www.UrgentCareCareerCenter.com

JUCM
THE JOURNAL OF URGENT CARE MEDICINE
CAREERCENTER

(201) 529-4020
classified@jucm.com