Evaluating muscle injuries and residuals of shell fragment and gunshot wounds

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Objectives

- To become familiar with the application of the rating schedule in evaluating muscle injuries
Muscle Injury Considerations

These ratings can be difficult, because the injuries that cause damage to muscles can also damage bones, joints and nerves.

When rating, 38 CFR 4.14 (rules of pyramiding) must be considered.
(a) A muscle injury will not be combined with a peripheral nerve paralysis rating of the same body part unless the injuries affect different functions.
Example – 4.55 (a)

- If the veteran has an injury to muscle group X and involves the external popliteal nerve, separate evaluations could not be assigned as both the nerve injury and muscle injury affect the same function.
(b) The skeletal muscles are divided into 23 muscle groups in 5 anatomical regions:

- Shoulder girdle and arm
- Forearm and hand
- Foot and leg
- Pelvic girdle and thigh
- Torso and neck
38 CFR 4.55 Combined Ratings for Muscle Injuries

(c) No ratings for muscles acting on ankylosed joints except:

1. Muscle group XIII with ankylosed knee – in this case the muscle injury would be evaluated at the next lower level than that which would be assigned.
Example 4.55 c(1)

- Vet has s/c for residuals of a shrapnel wound to the right knee. As the right knee is ankylosed at 15 degrees, a 40 percent evaluation is assigned. Evidence also shows muscle group VIII is disabled and warrants a moderately severe evaluation.
- What’s the appropriate evaluation for muscle group VIII?
Answer

Since the veteran is s/c for an ankylosed right knee, the muscle injury must be evaluated as “moderate” (the next lower level). So the veteran would be entitled to a 40 percent evaluation for the knee and a 10 percent evaluation for the muscle injury.
(c) No ratings for muscles acting on ankylosed joints except:

2. Muscle group I and II with ankylosed shoulder – in this case the evaluation of the shoulder joint under DC 5200 would be elevated to the level for unfavorable ankylosis, if not already assigned, but the muscle groups themselves will not be rated.
Example 4.55 c(2)

- Vet is currently evaluated as 20 percent disabling for residuals of a gunshot wound to the left shoulder under DC 5200 (based on unfavorable ankylosis – abduction to 70 degrees). Exam results show severe muscle injury to muscle group I and II. The shoulder is still favorably ankylosed.

- What is the appropriate evaluation?
Answer

As the evidence shows muscle groups I and II are both severely disabled, the evaluation for the shoulder under DC 5200 should be increased to the level of unfavorable ankylosis for a non-dominant shoulder which is 40 percent and no separate evaluations under DC 5300 would be warranted.
(d) The combined evaluation of muscle groups acting on a single unankylosed joint must be lower than the evaluation for unfavorable ankylosis for that joint. (Exception: Muscle groups I and II acting on the shoulder – in this case the evaluation can not exceed the rating for unfavorable)
Example 4.55(d)

- Vet is s/c for residuals of SFW to dominant right arm. Exam results show moderately severe muscle injury to MG V and a moderate injury to MG VI, which both act upon the elbow. There is no ankylosis of the right elbow.

- What is the appropriate evaluation?
**Answer**

- Muscle group V warrants a 30% evaluation
- Muscle group VI warrants a 10% evaluation
- So as these combined to 40%, which is less than the 60% that would be warranted for unfavorable ankylosis of the elbow, separate evaluations for the muscle injuries is permitted and appropriate.
38 CFR 4.55 Combined Ratings for Muscle Injuries

(e) For compensable muscle group injuries in the same anatomical region, but not affecting the same joint:

- the evaluation for the most severely injured muscle group will be elevated by one level and used as the combined evaluation for the groups.

- Can only elevate the level if the muscle injury is at least a moderate (compensable) injury
**Example 4.55(e)**

- Vet is s/c for residuals of SFW to the right thigh. Exam results show moderately severe injury to MG XIII (which affects hip and knee) and moderate injury to MG XVI (which affects the hip only).
- What is the appropriate evaluation?
**Answer**

- Muscle group XIII warrants a 30% evaluation
- Muscle group XVI warrants a 10% evaluation
- Since muscle group XIII is the most severely injured of the two and they act on separate joints belonging to the same anatomical region, a 40 percent evaluation is warranted (one level higher).
38 CFR 4.55 Combined Ratings for Muscle Injuries

(f) For muscle injuries in different anatomical regions that do not act on ankylosed joints:
- rate separately
Rate an open comminuted fracture with muscle or tendon damage as a severe injury of the muscle group involved, unless evidence establishes that the muscle damage is minimal, for locations such as in the wrist or over the tibia.
38 CFR 4.56 Evaluating Muscle Disabilities

A through-and-through injury with muscle damage shall be evaluated as no less than a moderate injury for each group of muscles damaged.
Cardinal Signs of Muscle Disability:

- Loss of power
- Weakness
- Lowered threshold of fatigue
- Fatigue-pain
- Impairment of coordination
- Uncertainty of movement
DC’s 5301 – 5323 are used to rate muscle disabilities with the following classifications:

- Slight
- Moderate
- Moderately Severe
- Severe
Slight disability of muscles

- Simple wound without debridement or infection.
- Record of superficial wound with debridement and return to duty
- Healing with good results
- No cardinal signs or symptoms of muscle disability and minimal scar
- No evidence of fascia defect, atrophy, or impaired tonus
- No impairment of function or metallic fragments retained in muscle tissue
Example of a slight muscle disability

Exam results show a residual superficial scar without tenderness or adherence of underlying tissue. Muscle strength was normal of 5/5. No evidence of metallic fragments retained in muscle tissue or impairment of function. Diagnosis – scar, residuals of shell fragment wound without functional impairment.
Moderate disability of muscles

- Through and through or deep penetrating wound of short track without explosive effective of high velocity missile, residuals of debridement, or prolonged infection
- Evidence of in-service treatment for wound
- Record of consistent complaint of one or more of the cardinal signs and symptoms of muscle disability
Moderate disability of muscles continued...

- Entrance and (if present) exit scars, small or linear, indicating short track of missile through muscle tissue
- Some loss of deep fascia or muscle substance or impairment of muscle tonus and loss of power or lowered threshold of fatigue when compared to the sound side
- Retained foreign bodies with residuals or evidence of muscle damage
Example of a moderate muscle disability

Exam results show a small linear entrance and exit scar without objective findings of tenderness. Muscle strength was 4/5 for the right leg when compared to the left side. On palpation, there was evidence of loss of deep fascia. Following repetitive motion of the right leg, there was evidence of fatigue and pain.
Moderate severe disability of muscles

- Through and through or deep penetrating sound with debridement, prolonged infection, or sloughing of soft parts, and intermuscular scarring
- Evidence of hospitalization for a prolonged period of treatment of wound
- Record of consistent complaint of cardinal signs and symptoms of muscle disability and if present, evidence of inability to keep up with work requirements
Moderate severe disability of muscles continued....

- Entrance and (if present) exits scars indicating track of missile through one or more muscle groups
- Indication on palpation of loss of deep fascia, muscle substance, or normal firm resistance of muscles compared with sound side
- Evidence of impairment in strength and endurance compared with sound side
Example of moderately severe muscle disability

Exam result show evidence of a entrance wound without tenderness or adherence of underlying tissue. On palpation, there was loss of deep fascia. Muscle strength was 3/5 in the left upper extremity when compared to the right side. There was evidence of lower threshold of fatigue and complaints of difficulty working due to fatigue.
Severe disability of muscles

- Through and through or deep penetrating wound due to high-velocity missile, or large or multiple low velocity missiles, or with shattering bone fracture or open comminuted fracture with extensive debridement, prolonged infection, or sloughing of soft, intermuscular binding and scarring
- Evidence of hospitalization for a prolonged period of treatment of wound
Severe disability of muscles continued....

- Record of consistent complaint of cardinal signs and symptoms of muscle disability, worse than those shown for moderately severe muscle injuries, and, if present, evidence of inability to keep up with work requirements.
- Ragged, depressed and adherent scars indicating wide damage to muscle groups in missile track.
- Palpation shows loss of deep fascia or muscle substance, or soft flabby muscles in wound area.
Severe disability of muscles continued....

- Muscles swell and harden abnormally in contraction.
- Evidence of severe impairment of function in regards to strength, endurance, or coordinated movements compared with the corresponding muscles of the uninjured side.
Severe disability of muscles continued...

If present, the following are also signs of severe muscle disability:

- X-ray evidence of minute multiple scattered foreign bodies indicating intermuscular trauma and explosive effect of the missile.
- Adhesion of scar to one of the long bones, scapula, pelvic bones, sacrum or vertebrae, with epithelial sealing over the bone rather than true skin covering in an area where bone is normally protected by muscle.
Additional signs of severe muscle disability continued...

- Diminished muscle excitability to pulsed electrical current in electrodiagnostic tests.
- Visible or measurable atrophy.
- Adaptive contraction of an opposing group of muscles.
- Atrophy of muscle groups not in the track of the missile, particularly of the trapezius and serratus in wounds of the shoulder girdle.
- Induration or atrophy of an entire muscle following simple piercing by a projectile.
Example of severe muscle disability

Exam results show an entrance and exit scar that is adherent to the underlying tissue. On palpation, there was loss of muscle substance. Strength was 3/5 when compared to the sound side. There was evidence of muscle atrophy. X-ray results revealed minute multiple scattered foreign bodies.
Separate ratings...

- If the veteran’s scar is superficial and painful on examination *without* underlying soft tissue damage, the scar should be evaluated separately under DC 7804
Example of separate evaluations for muscle injury and scar

Exam results show that the veteran has a moderate injury of the muscle and a superficial tender scar. In this case, assigning a 10 percent evaluation for the muscle group and a 10 percent evaluation for the tender scar under DC 7804 is appropriate.
Separate ratings for a joint disability and a muscle disability may be appropriate, if there is a joint injury leading to traumatic arthritis and a muscle injury to a muscle in the same anatomical region that does not act on that joint.

If there is pain and limitation of motion due to arthritis, you could rate the muscle injury based on other cardinal signs and symptoms of muscle disability (which is not a violation of 4.14).
Separate ratings ...

- A veteran who sustains a gunshot wound of the head may have one or more of the following residuals, all of which are separately ratable:
  - Skull loss
  - Injury to the facial muscles
  - Injury to the cranial nerves
  - Impairment of visual acuity or field of vision
  - Seizure disorder
  - Organic brain syndrome due to trauma
  - Facial disfigurement and scars
  - Varying degrees of neurological deficit in the upper or lower extremities
Notes under two of the diagnostic codes in the 5300 series

(1) **Muscle Group IX** (the intrinsic muscles of the hand) - The note following Diagnostic Code 5309 advises that the hand is so compact a structure that isolated muscle injuries are rare, being nearly always complicated with injuries of bones, joints, tendons, etc. As such, injury to Muscle Group IX is to be rated on the basis of limitation of motion. The minimum rating is 10 percent.

(2) **Muscle Group X** (the intrinsic muscles of the foot) - The regulatory note following Diagnostic Code 5310 provides that the minimum rating for through-and-through wounds of the foot is 10 percent.
**Important Reminders**

**AMPUTATION RULE 38 CFR 4.68** - The combined rating for disabilities of an extremity may not exceed the rating for amputation at the elective level, were amputation to be performed.

*Example:* The combined evaluations for disabilities below the knee shall not exceed the 40 percent evaluation provided under DC 5165 (anatomical loss at a lower level, permitting prosthesis). The 40 percent rating may be further combined, pursuant to § 4.25, with an evaluation for disabilities above the knee, but not to exceed the above the knee amputation elective level.
Rules against pyramiding:

The evaluation of the same disability under various diagnoses is to be avoided.

The key is to look at the specific manifestations of the disabilities involved, and determine whether there is additional impairment not accounted for by the rating assigned to the muscle injury.