Ankle Injury – X-Ray for Acute Injury of the Ankle or Mid-Foot

Effective Date: March 15, 2014

Scope

This guideline makes recommendations for adults aged ≥ 19 years with acute ankle and mid-foot injuries, presenting for the first time in a clinical setting (emergency department and primary care). This guideline excludes recommendations for patients younger than 19 years, with multiple painful injuries, pregnant, cognitively impaired or with sensory deficits in their lower extremities.

Key Recommendations

- Use the Ottawa Ankle Rules (OAR) to exclude fractures and reduce unnecessary imaging.1-3
- Advise patients to seek follow-up care if their pain or ability to bear weight has not improved in five to seven days.4

Diagnosis

Historically imaging is ordered for most patients presenting with an ankle and/or mid-foot injury even though only about 15% have clinically significant fractures.1-3

This guideline recommends the use of the OAR when diagnosing ankle and mid-foot fractures and to reduce unnecessary imaging.1-7

Screening

Ankle x-rays are required only if there is pain in the malleolar zone (refer to Figure 1) as well as any one of:
- Bone tenderness at A; or
- Bone tenderness at B; or
- Inability to bear weight both immediately and in the clinical setting (unable to take four steps independently, even if limping).

Foot x-rays are required only if there is pain in the mid-foot zone (refer to Figure 1) as well as any one of:
- Bone tenderness at C; or
- Bone tenderness at D; or
- Inability to bear weight both immediately and in the clinical setting (unable to take four steps independently, even if limping).

Whether or not an x-ray is ordered, it is recommended that the patient seek follow-up care if their pain or ability to bear weight has not improved in five to seven days.
Figure 1: Zones of the Ankle and Mid-Foot According to the Ottawa Ankle Rules

Resources

References

Resources
- The Ottawa Hospital Research Institute, www.ohri.ca/emerg/cdr/ankle.html - provides the OAR in various printable formats.

Diagnostic Codes
845 sprains and strains of ankle and foot
824 ankle fracture

This guideline is based on scientific evidence current as of the Effective Date. This guideline was developed by the Guidelines and Protocols Advisory Committee, approved by the British Columbia Medical Association, and adopted by the Medical Services Commission.

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- encourage appropriate responses to common medical situations
- recommend actions that are sufficient and efficient, neither excessive nor deficient
- permit exceptions when justified by clinical circumstances

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