The optimal surgical technique for managing syndesmotic injuries continues to be debated. No consensus exists on the ideal implant (screw vs suture button), screw diameter, number of screws, number of cortices purchased, or timing and necessity of screw removal. Regardless of the technique used for syndesmotic fixation, accurate reduction of the tibiofibular joint is essential to minimize tibiofibular diastasis and optimize patient outcomes. Although several radiographic parameters have been described in the coronal plane to assist in reduction, tibiofibular diastasis following syndesmotic injury often occurs in the sagittal plane, with the fibula displacing posterior relative to the tibia. A technique using lateral fluoroscopic assessment of the uninjured contralateral ankle as a comparison and guide for accurate syndesmotic reduction is described.

Intraoperative Contralateral View for Assessing Accurate Syndesmosis Reduction

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Abstract: Accurate reduction of ankle syndesmosis following injury is essential to minimize tibiofibular diastasis and optimize patient outcomes. Although several radiographic parameters have been described in the coronal plane to assist in reduction, tibiofibular diastasis following syndesmotic injury often occurs in the sagittal plane, with the fibula displacing posterior relative to the tibia. A technique using lateral fluoroscopic assessment of the uninjured contralateral ankle as a comparison and guide for accurate syndesmotic reduction is described.

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method, accurate syndesmosis reduction is confirmed in both the coronal and sagittal planes (Figure).

**Discussion**

Patients with malreductions of the syndesmosis have worse functional outcomes than those with an appropriately reduced syndesmosis. Syndesmotic malreduction is common and may depend on the surgical technique used. Although coronal plane parameters are often used to judge syndesmotic reduction, cadaveric studies have shown that tibiofibular distal following syndesmotic injury occurs primarily in the sagittal plane, with the fibula displacing posterior relative to the tibia. Use of the uninjured side as a template for syndesmotic reduction is helpful because use of standard biplanar fluoroscopy of the injured side can still lead to rotational malreduction of the syndesmosis by as much as 30°. Comparison of the posterior tibiofibular distance of the operative and nonoperative sides decreases the chance of syndesmotic malreduction and may help improve patient outcomes.

**Conclusion**

Lateral fluoroscopic assessment of the uninjured contralateral ankle as a guide for accurate reduction of the tibiofibular syndesmosis provides an additional tool for achieving an anatomic reduction. This technique adds negligible operative time and radiation exposure.

**References**