

## Case study: Stryker's SpeedGuide may be useful for efficient fixation of routine and complex ankle injuries

A review by Rosemary Buckle, MD

### Patient history:

72 year old woman sustained right lateral malleolus and tibial plafond fracture in a fall. She is otherwise healthy and lives independently. She presented to the emergency room and an orthopedic surgery consultation was requested.

### Assessment:

Thorough history, physical exam and review of the radiographs were performed. The assessment revealed a closed lateral malleolus fracture with significant fracture displacement, along with a tibial plafond fracture.

Treatment options were discussed with the patient with the recommendations for surgical intervention. The indication for surgery was fracture displacement and disruption of the ankle mortise.

### Procedure/treatment:

A lateral approach to the lateral malleolus was chosen to expose the fracture site. The fracture was reduced and the appropriate length VariAx Distal Lateral Fibula plate was chosen to apply to the lateral surface. Once fracture reduction and plate position was confirmed radiographically, the VariAx SpeedGuide was used to place a combination of locking and non-locking screw (see figure 1).

Hand held retractors were not necessary. Intraoperative radiographs demonstrated satisfactory placement of the hardware and anatomic alignment of the fracture.

Once the lateral malleolar fracture was fixed with the VariAx Distal Lateral Fibula Plate and length restored, attention was turned to reduction and stabilization of the tibial plafond fracture.

### Discussion and conclusion:

The VariAx Distal Fibula and AxSOS 3 Systems were chosen for this case. In particular, the distal fibula plate and distal tibial plates were chosen.

Although it may not be necessary, plates may be contoured to adapt to individual patient anatomy. A variety of hole, shape and length configurations are available for the majority of fracture patterns one might encounter.

The SpeedGuide was used with the VariAx Distal Lateral Fibula plate, and utilized to assist with plate application. The all in one tool is a soft tissue protector, drill guide, drill, and depth gauge all in one (see figure 2). The slender design is intended to not obscure the surgeon's view.

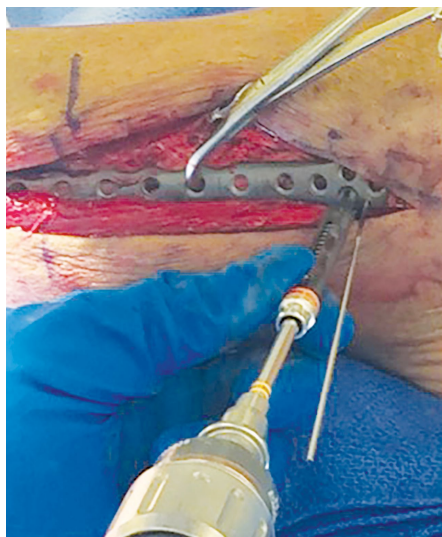
The barrel is designed to protect critical structures around the drill so as to avoid injury. Finally, the appropriate length screw can be chosen as one reads the length directly off the speed guide.



Figure 1



Figure 2



**Figure 3a**



**Figure 3b**

Efficiency in the operating suite is of paramount importance. Lateral malleolar ankle fractures are very common injuries. Often they occur alone but also can be seen in combination with medial and posterior malleolar fractures.

In the more difficult tibial plafond fractures, efficient fixation of the lateral malleolus is critical. In this case, use of the SpeedGuide contributed to a quick operative time for the lateral malleolus, leaving more tourniquet time to fix the more complicated tibial plafond fracture (see figure 3a).

Finally, the retractable drill bit within the barrel of the SpeedGuide may offer enhanced safety in the operative suite. Decreasing the passage of sharp instruments along with decreased sharp instruments on the mayo stand may improve operating room safety during surgery (see figure 3b).

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