



AAC Publications

Rappel Error – Damaging Pendulum Swing

Yosemite Valley, Royal Arches Area

On May 3, at approximately 11:30 p.m., a climber notified park rangers that his climbing partner might have sustained a broken leg during a rappelling accident while descending from the route Sons of Yesterday. The patient was located on a belay ledge at the start of the second pitch of the route Super Slide, to climber's left of Sons of Yesterday. A decision was made to rescue the patient at first light the next day, as it was considered unsafe to initiate a technical rescue at that time.

At about 8:15 the next morning, a first responder reached the patient, who was alert and oriented, and stated that he had swung into a wall and impacted with his arm and leg while rappelling. His chief complaint was the pain from his leg injury; his upper leg was swollen. After providing patient care and establishing fixed lines to the location, the team lowered the patient, packaged in a rigid litter, to the ground. The rescue team then did a carry-out to the Ahwahnee parking area and transferred care to the Valley ambulance.

ANALYSIS

A debrief of the incident revealed that the injury occurred while the climbers were rappelling from an anchor on Sons of Yesterday to the top anchor of Serenity Crack. (Sons of Yesterday begins above the third pitch of Serenity Crack.) If intermediate rappel stations are skipped here, this rappel requires tensioning hard to the right on a blank face. Left of the fall line is a large drop-off. The patient lost control of his footing, which sent him into a pendulum over the drop-off at a rate of speed high enough to result in a broken femur and wrist. Use of an intermediate rappel station removes the need to tension so far to the right on rappel.

We later spoke with another climber who had lost control of his rappel in the same spot and also swung around the corner. As climbers we sometimes underestimate the force of an out-of-control pendulum. Always watch the angle of deflection from your upper anchor and ask yourself: Am I willing to risk a downward fall in this terrain? A pendulum can generate the same amount of force as falling straight down, and exposes a larger, more vulnerable section of the body to impact.

Lastly, this incident is a great reminder of the importance of a no-hands backup in any rappel system. This climber's backup helped him maintain control even after sustaining serious injuries, allowing him to continue lowering himself to the ledge on which he was found. It may well have saved his life. (Source: Yosemite National Park Climbing Rangers.)

Images



As a climber tried to rappel from point A to approximately point B, he slipped and pendulumed violently to the left over the large, shaded corner.

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