Fall on Rock – Inadequate Protection, Inexperience

California, Yosemite Valley, Leaning Tower, West Face

On September 27 at 8:25 a.m., 911 received a call from a climber on the west face of Leaning Tower, reporting another climber's fall. At the time, the injured lead climber was hanging unconscious 10 feet below Guano Ledge, after taking a lead fall of approximately 20 feet near the start of the fourth pitch.

YOSAR mobilized two teams: a climbing team to start ascending the route to Guano Ledge, and a top-down team prepared for a 1,200-foot lower with litter to package the climber and continue to the ground. A group of six was inserted just below the summit of the west face at Dano Ledge (pitch eight); without a landing zone atop Leaning Tower, it was necessary to insert the team using short-haul shuttles. From there, a park ranger and litter were lowered to within 40 feet of the climbers. The ranger tossed a beanbag-weighted pull cord to the climbers in order to be hauled into their position on this severely overhanging wall.

The injured climber was packaged into the litter at 12:20 p.m., lowered to the ground, and flown from the base of Leaning Tower to El Cap Meadow. The partner of the injured climber rappelled to the ground with the YOSAR climbing team, and the YOSAR members still at the summit descended via the Leaning Tower Chimney. The injured climber was transferred from El Cap Meadow by ambulance, and a visit to the hospital revealed no major injuries. The climber was released the same day.

Analysis

A follow-up interview was conducted with the partner of the injured climber. The two climbers were on their first climbing trip in the Valley. Both had five years of climbing experience, including three years of trad experience, and had climbed together before. They considered themselves to be "more free climbers," with experience climbing in Washington state that included a few multi-pitch routes. Leaning Tower was their first attempt at a big wall and first aid climb. They said it seemed like a good introductory wall because the route looks like it was "mostly bolt ladders" on the topo.

The accident occurred on the team's second day of climbing, after sleeping on the popular Ahwahnee Ledge, left of Guano Ledge. The climbers had spent the night alongside a soloist and also noticed a second soloist coming up the pitch below Guano Ledge as they began climbing the second morning.From Guano Ledge, the leader clipped a bolt as the first piece of protection before making a pendulum to the right, around a right-facing corner, to access a thin crack. The leader proceeded to aid up the crack without leaving any gear for protection, as the climbers were concerned about rope drag after the pendulum. As the leader stood in his aiders on a micro-cam, the belayer remembers hearing a "pop" and seeing the climber swing sideways, back around the corner, and fall below Guano Ledge.

The belayer considered the fall to be large but not severe and called out to the leader to see if he was okay. The leader was unresponsive, and the soloist on Awhanee Ledge told the belayer, "He's shaking." For about a minute, the leader appeared to have a seizure while the belayer attempted to call 911 on a cell phone. The belayer was unable to get a call out, and asked the soloist to try calling. The soloist reached 911 and was transferred to YOSAR to discuss a rescue. While on the phone with YOSAR, the leader remained unresponsive but moaning.After getting off the phone with YOSAR, the soloist traversed a fixed line 15 feet from Ahwahnee Ledge to Guano Ledge to assist in getting the

injured leader back to Guano Ledge. By that point the leader had regained consciousness but still seemed disoriented.

The belayer and soloist lowered a haul line with an auto-locking carabiner to the injured leader, asking the climber to clip it into his belay loop in order to be hauled back to the ledge. Despite articulating the plan to the leader, the leader proceeded to take the carabiner off the haul line and clip it to a gear loop on his harness. Realizing the leader was unable to respond appropriately in his current mental state, the soloist rappelled to the leader and clipped him into the haul line. The second soloist had also reached Guano Ledge by this point, and the three climbers built a 6:1 mechanical advantage system to haul the climber to the ledge. The belayer estimates it took about 10 minutes to get the leader up to the ledge.

Once the leader was at Guano Ledge, the belayer monitored his pulse and breathing, attempting to keep him still due to concern of spinal injury. The leader was “irritated” about the immobilization and wanted to move around the ledge. Their was discussion of rappelling the route with the injured leader; however, one of the soloists cautioned against rappelling, saying that it was “extremely hard to get back into the wall” due to the overhanging nature of the route. A few hours later, YOSAR lowered into Guano Ledge and took the leader to the ground in a litter.

In the right place, a leader can fall 100 times and never get injured; in the wrong place, a single fall can be guaranteed to cause injury. When leading, we make judgment calls: “If I fall here, are there any ledges to hit?” It’s more difficult to judge the severity of a pendulum fall. Although it’s counterintuitive, a swinging pendulum fall is often more dangerous than a vertically oriented leader fall, due to fall force and terrain to smash into. When the micro-cam the leader was standing on pulled out, he was pulled off balance as he swung back left. A few right-facing corners created features to impact during the swing, and he appeared to hit the back of his head during the fall, beneath the rim of his helmet.

The belayer noted that the climbers had been anxious to move quickly that morning because of the other parties on the wall, and that the leader was potentially moving faster than he would have otherwise. On popular walls like the west face of Leaning Tower, the Nose of El Cap, and the Prow of Washington Column, you will often see multiple parties of different experience levels sharing bivies and belays. Be cognizant of your experience level and plan accordingly for sharing the route. Sometimes it is important to move quickly past bottlenecks of climbing parties, but other times it is better to slow down and let other teams to pass. Conversely, if it looks like your team’s progress is contributing to stress for another climbing team, communicate with that team to make sure everyone can proceed safely.

The leader avoided clipping protection after the pendulum in order to avoid rope drag on the pitch. Climbing above a pendulum point is a notorious big-wall risk scenario. There are many locations where it may seem better to “walk” cams after a pendulum in order to avoid creating a “Z” in the rope. Using long runners can be effective in reducing rope drag in these situations. If there is no way to extend your placements for reduced drag, one could climb up, clipping gear along the way, then lower off solid protection to back-clean the problematic placement(s).

The belayer also commented that the climbers may not have been bounce-testing their placements regularly. While free climbing it is rare to test placements beyond a quick tug; however, when aid climbing it’s a good idea to test most placements with at least one’s body weight. Had this climber bounce-tested the micro-cam from below while still weighting his lower piece, he may have discovered the cam placement was not adequate before trusting it as his sole protection. (Source: Ranger Eric Bissell.)

Images

YOSAR team members managing rescue systems near the top of Leaning Tower in Yosemite Valley.

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