

CLIMBER CAUSED FRACTURE OF ICE DAM RESULTING IN FALLING WATER AND FALL ON ICE, CLIMBING UNROPED, INADEQUATE PROTECTION, WEATHER, EXPOSURE

California, Lee Vining Canyon

On February 16, Christy McIntire (31) and Victor Lawson (37) were ice climbing in Lee Vining Canyon, just east of Tuolumne Meadows. They began their day of climbing on Main Wall, a popular area for ice climbers in the eastern Sierra. After topping out Main Wall on a WI4 multi-pitch route, they discovered an enticing smaller wall of ice, roughly one pitch long and WI2 at its steepest. As they approached the flow, both McIntire and Lawson deemed it safe to climb without a rope given their collective experience and comfort on ice in this difficulty range. With the rope and packs left at the base, they began to ascend the snowfield towards the ice wall. Staggered horizontally about fifteen feet apart and Lawson ten feet above, McIntire and Lawson started climbing the less than vertical ice confidently.

Lawson was the first to reach the top of the ice wall. As he swung in his right tool into the most prominent part of the top of the ice, which ended the steep section of ice, he instantly heard a “Velcro ripping” sound. He watched as two huge fracture lines split out from his pick and met after forming a “body-sized” plug of ice that “hovered for a split second” before being blown out and down by a surge of water. Lawson recounts how the ice almost “bubbled up and blew a part like a blister,” releasing a ton of water and ice. Broken ice and water gushed out and fell down onto McIntire, who was still ten feet short of the top out. The three-foot wave of water, thick with pieces of broken ice and slush, overtook McIntire and pushed her off the ice wall and down into the snowfield a total of eighty to a hundred feet. The fall was not clean. She hit rocks and bumps of ice, bruising and breaking her body. During the fall, McIntire lost her ice tools (she was climbing leash-less), which prevented her from making a self-arrest once she hit the snowfield at the base of the flow. Finally, after digging her limbs into the snow, she managed to stop before hitting a large talus field. Conscious but disorientated, McIntire began to crawl away fearing more debris may come down onto her. However, the fall had a rattling effect and McIntire, extremely disoriented, was actually only crawling in circles at the base of the ice wall.

Meanwhile, Lawson, who was unharmed, topped out and then down climbed easier terrain to reach her. McIntire performed a self-assessment and determined that she was severely injured and unable to walk, let alone stand. Not only was McIntire’s body broken from the fall, but also she was completely damp from the surge of water. Concerned about hypothermia, she stripped off her wet outer layers and put on pieces of dry clothing from

Lawson. Lawson and McIntire employed several techniques to cover the difficult winter terrain. She was able to scoot on her backside for the steeper sections of the descent and be dragged by her daisy chain on her harness during the flatter parts of the descent with the help of Lawson. The descent back to their truck took over four hours (normally a 30 minute hike). Finally the pair reached the truck at 9:00 p.m. and contacted Northern Inyo Hospital in Bishop, where McIntire works as RN. She informed the ER staff of the accident and her need for immediate medical attention once they arrived to town. The drive took about an hour and a half. After being examined by doctors, McIntire's injuries from the accident were diagnosed as a concussion, a torn ACL, a torn medial and lateral meniscus, a tibial plateau fracture, two sprained ankles, a broken great toe, multiple contusions and small lacerations.

Analysis

You cannot control nature. Rocks break, ice will crack, snow can slide and water can fall. No matter the terrain and the level of experience of the climber, accidents can happen beyond any climber's control and it is the job of the climber to always use best judgment to keep themselves and their partner safe. Soloing is ALWAYS dangerous and it is important for a climber to be aware of the full risks to make the best decision of how they choose to climb. For McIntire and Lawson, this particular accident took place at the very end of the day when the pair was trying to squeeze in one last climb before the day ended. More attention to temperatures of the day and the recent week might have helped prevent the accident. Most importantly, knowledge and awareness of different ice climbing conditions may help prevent disasters. McIntire and Lawson, both experienced ice climbers, had never heard of an ice dam before the accident took place. Knowledge of such a force in their field of climbing might have made these climbers aware of this possibility.

For McIntire, climbing with her ice tools without leashes may have saved her life. Had her tools been leashed, they might have caused her to experienced deadly puncture wounds, causing the accident go from severe to fatal. Lawson also had no formal training in wilderness emergency response. In this case, common sense and McIntire's training as a RN helped them make smart choices, post accident.

If one intends to engage in outdoor adventure with potentially high consequences, it's highly recommended that they also become certified as a Wilderness First Responder, Emergency Medical Technician, or equivalent, and are up to date on self rescue skills. Ice climbing has many outside risk factors that can vary depending on temperature and weather conditions, requiring constant re-assessment and awareness of ice conditions and surroundings. (Source: Christy McIntire)