High Altitude Cerebral Edema

Alaska, Denali, West Buttress

The four climbers of expedition "TEAM ECS'16" flew to Kahiltna base camp at 7,200 feet on May 31. Thirteen days later, on June 12, TEAM ECS'16 moved to 17,200-foot camp and then left for a summit attempt the following day. Throughout the day, this team interacted with expedition "Mountain Wolverun" at multiple points along the climbing route. At 11 p.m., TEAM ECS'16 was descending from the summit as Mountain Wolverun was ascending the final ridge. The two teams met again at 19,500 feet at 1:30 a.m. During this encounter, members of expedition Mountain Wolverun noted that one member of TEAM ECS'16, a 66-year-old man, appeared to exhausted and having some difficulty walking—signs and symptoms of possible high altitude cerebral edema (HACE).

One member of Mountain Wolverun remained with TEAM ECS'16 while his two teammates continued their descent to 17,200-foot camp. Those on scene reported that the sick climber quickly deteriorated, and at 18,500 feet, near Zebra Rocks, his eyesight failed. Subsequent to this development, the patient became disoriented and was no longer able to walk. The climber from Mountain Wolverun determined that a ground rescue with the limited number of climbers present was not feasible, and he descended solo to request help from mountaineering rangers.

At 5:25 a.m. the Alaska Region Communication Center (ARCC) received an emergency call from the solo climber via satellite phone. The mountaineering ranger on call received notification at 5:35 a.m. and began to mobilize rescue resources. At 7:30 a.m., Andreas Hermansky piloted the NPS contract helicopter from Talkeetna to 14,200-foot camp to retrieve mountaineering ranger Dan Corn for a reconnaissance flight. It was determined that a short-haul operation utilizing a rescue basket would be the best method, given the patient's location and altitude.

At approximately 8:50 a.m., the patient was loaded into the rescue basket attached to the end of the rescue line and flown down to 14,200-foot camp, where advanced medical interventions were initiated. At 9:46 a.m., advanced life support was discontinued and the patient was pronounced deceased.

ANALYSIS

Climbers must remain diligent in assessing themselves and their teammates for symptoms of high altitude illness. If altitude illness presents, teams should descend immediately to an elevation where the patient returns to his or her normal baseline. It is unclear when this patient first began to experience symptoms of HACE, but, typically, by the time a patient presents with ataxia (difficulty walking) it is too late for self-evacuation.

In the high alpine arctic environment, ground rescue can be extremely physically taxing. The difficulty for rescuers is amplified when a patient becomes non-ambulatory. Climbers in such situations face a predicament in deciding whether to remain on scene to assist a companion or leave to summon additional resources. A radio or other communication device may help, but even then the decision-making may be difficult. Attempting to provide the greatest good for the greatest number of people, including the patient, his or her companions, and the rescuers, should be the guiding principle.
(Source: Denali Mountaineering Rangers.)

ANOTHER CASE OF HACE REQUIRING EVACUATION: On June 26, a climber at 14,200-foot camp on the West Buttress Route began exhibiting the symptoms of HACE. Her team had followed an average ascent profile, traveling nine days from 7,200-foot camp to reach 14,200 feet. The patient initially complained of a severe headache (10/10 on pain scale) and blurred vision. When she failed to respond to medications provided by her guide, she was transported to the NPS medical tent for additional care, including oxygen therapy and hyperbaric chamber treatments, and was evacuated to Talkeetna by helicopter on June 27.

Images

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