Bonnie Lamb

Paramedics Rebecca Herrmann and Timothy Berry of Charleston EMS transport a patient off the ice.

Ice Breakers

Move over, Nancy and Tonya! The next generation is already training—and experiencing sports injuries.

By Jeffrey W. Wimer, MS, ATC, EMT

Summer is here, but the traditional winter sport of ice skating is more popular than ever, thanks to the highly publicized Nancy Kerrigan/Tonya Harding media frenzy and unprecedented interest in the 1994 Winter Olympics.

As youngsters beat the heat at indoor rinks around the country, you may be called upon to maneuver your stretcher across the ice and treat an injured athlete. Novice skaters who lack formal training or proper coaching are most susceptible to injury.

Although uncommon, extraordinary injuries—like finger amputation from an ice-skate blade—can occur at the ice rink. Thankfully, abrasions and contusions to wrists, knees and elbows are far more common.

Wrist Risks

Falls account for most ice-skating injuries. Ice is a hard surface, and landing on an outstretched hand in an attempt to break a fall is a prevalent mechanism of wrist injury. Injuries (usually contusions) can also result from a direct blow.

You must carefully examine contusions for associated injuries to underlying structures. Transport any skater who exhibits sharp, localized pain over a bony prominence and/or tingling or numbness radiating into the fingers. Fractures to the radius and ulna may be obvious, but those involving the small bones of the wrist can be hard to determine at the scene.

A displaced fracture to the distal end of the radius, resulting from a fall onto an outstretched hand, is known as a Colles' fracture. The patient will present with tenderness over the lower end of the radius and complain of pain on hand movement.

Exercise special caution with young patients. Preadolescent skaters are predisposed to epiphysial fractures involving the distal radius or ulna. The epiphysial, or growth, plate is found at the end of long bones and is the weakest link along the bone in growing children. Suspect a fracture anytime a young skater presents with tenderness about the wrist after trauma to the area.

Injuries may also occur when stress is applied beyond the wrist's normal range of motion.

Indirect trauma from a fall may involve the elbow, but most elbow injuries in ice skating are limited to abrasions and contusions.

You must inform injured skaters and their parents that an abrasion or contusion can limit activity. Return to the ice is often based on the amount of pain and functional ability, and a physician or athletic trainer should make the ultimate determination.

Head Injuries

Ironically, severe ice-skating injuries to the head occur most often when skaters are standing on the ice, not moving. Athletes generate momentum when they skate, and they're less likely to fall directly (straight down) on the ice while moving. A skater who does fall while moving is less susceptible to head injury because of sliding actions across the ice. In contrast, the skater who is standing still has no momentum and is at greater risk of blunt trauma.

Head injuries most frequently occur when a skater lands on the back of the head. The most common injury is a concussion. The skater may be confused or unconscious, making assessment difficult.

Facial lacerations also account for a percentage of ice-skating injuries to the head region. They usually follow some type of direct blow to the skin and are especially common over a bony prominence, such as the chin. Lacerations are often described as a combination of a contusion and tear.

Assume possible cervical-spine injury anytime there's soft-tissue damage to the head, face or neck following trauma.

When the Ice Isn't So Nice...

The 1994 Winter Olympics is testament to ice skating's potential hazards. The sport's unique combination of powerful, rapidly executed jumps and balletic footwork can create problems for athletes at even the highest levels of competition.

During skating practice in Norway, German skater Tanja Szewczenko collided with the Ukraine's Oksana Baiul, who later went on to take the gold medal. Baiul required three stitches for a 2"-long, ½"-deep cut on her right shin; she also suffered shoulder and lower back pain. Szewczenko sustained a bruised right hip.

During the ice-dancing competition, two pairs—one American, one German—experienced major falls while performing lifts, leading to bruised elbows, tailbones and chins.

Then, of course, there's Nancy Kerrigan's knee—but we have a feeling you already knew about that ...

—Ed.

Overuse Injuries

Overuse injuries—a catchall term for chronic painful conditions caused by repetitive movements—usually affect figure skaters who are learning double and triple jumps. Progressive and degenerative microscopic damage to soft tissue may develop.

Bursitis and tendinitis are the medical terms most often associated with overuse conditions. In skaters, these conditions appear to be associated with repetitive activity on a hard surface or forcible, excessive use of the leg muscles (as occurs in jumping). Ice skaters with overuse injuries almost always have a history of high-intensity training and usually have increased their training regimen recently. Overuse problems often occur early in a training program or after training has been discontinued for a period of time and then resumed. Treatment must emphasize a modification in the training regimen and effective rehabilitation.

The Cold, Hard Facts

Ice-skating rinks pose interesting logistical challenges for EMTs and paramedics. Foot traction on ice is minimal. Packaging a patient is difficult on ice, and maneuvering a wheeled stretcher is cumbersome, at best. Careless moves can further harm your patient.

Negotiating your way on and off the ice is easier with a rubber-backed runner: a long, narrow strip of carpet, provided by the rink, that can be rolled out onto the ice to provide good traction. It will allow you to wheel your patient off the ice more safely.

If, for some reason, the rink is unable to provide a runner, a blanket or sheet may suffice, but be forewarned: These items can become tangled in the wheels of your stretcher and create additional problems.

Be sure to properly secure your patient to the stretcher to avoid falls. A scoop-style stretcher may be less awkward to use on the ice, but it's not the device of choice for primary spinal immobilization.

Bibliography

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