Fractured larynx repaired

Mikaela and her father, **John Flood**, love to play games. One of their favorites is roughhousing in their family room. A precocious 8-year-old who is into gymnastics, Mikaela didn't know what to think when her father dropped to his knees during one of their typical "matches."

"He kids around a lot, so I didn't know if he was hurt or if he was kidding," Mikaela recalls.

During their play, she'd apparently kneed John in the neck.

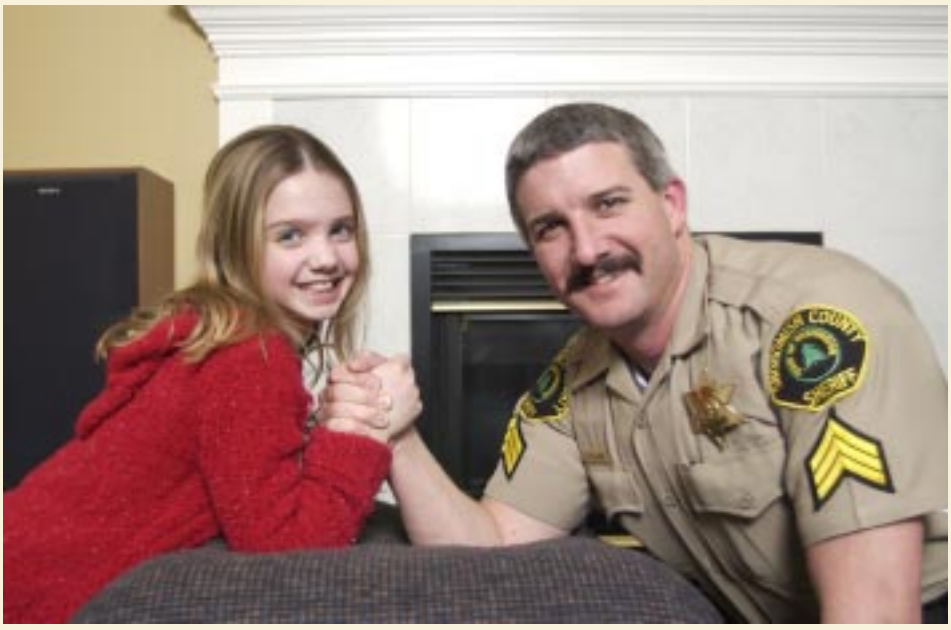
"I couldn't breathe and I couldn't talk," John says. "It really put me down, but I didn't want Mikaela to see how much it hurt."

That night, John's neck and throat began to swell and he couldn't eat and was still having trouble breathing. But thinking that he'd just received a good bruise, John decided to wait before seeing his doctor. Two weeks later, when he did go in for a visit, his throat was still very sore, he couldn't project his voice, and he'd run out of air while speaking. But, his doctor, too, thought he'd suffered a deep bruise and said it would get better in time. Six months later, when John was still having trouble, his doctor sent him to an otolaryngologist, who discovered a fracture in John's larynx that had healed incorrectly.


Pat Waugh & Dr. Al Hillel

"He gave me voice therapy for three months, but there was no improvement," John says. "That's when he sent me to see **Dr. Al Hillel**, professor of otolaryngology - head and neck surgery, at UW Medical Center. Dr. Hillel looked at my CT (computed tomography) scans and my throat and said: 'We can try to fix this.'"

Dr. Hillel performs voice reconstruction surgeries for people like John, but also for patients with paralysis in the vocal cords or for cancer patients after treatment. During the surgeries, the patients are awake so that Dr. Hillel and **Pat Waugh**, a speech pathologist who works with him, can listen to their voices as the position of their vocal cords is changed.


Mikaela and John now confine their roughhousing to arm wrestling.

"We use a tiny laryngoscope that we pass through the nose to see the vocal cords. A special strobe light allows us to see the vocal cords vibrate, which lets us diagnose the cause of the voice problem," says Waugh. Dr. Hillel and Waugh have worked together for over 10 years seeing patients as a team. With their equipment and experience, they usually can devise a plan to help patients with abnormal voices. After surgery, most patients adapt quickly to the new position of their vocal cords and rarely need post-operative speech therapy.

With many repairs, a small implant is used during the surgery to move the vocal cord. The size and shape of the implant is changed according to the change in the patient's voice during the surgery.

For paralyzed vocal cords, Dr. Hillel may use laryngeal reinnervation, where a healthy nerve from a neck muscle is attached to the vocal cord nerve so the vocal cord regains strength and size. "It is as good or better than repositioning the vocal cord, and does not need a surgical implant," says Dr. Hillel.

In cases like John's, the fractured larynx is realigned and held into position by tiny metal plates and miniature screws.

"I feel better," John says, "and I am happy with the results."

This year, the Otolaryngology – Head and Neck Surgery Center is adding state-of-the-art digital technology to their stroboscope system, which will greatly improve upon the broadcast quality tape recorder in current use. The digital system will allow instant access to patients' recordings and allow them to be shared with referring physicians more easily than ever before.

For more information about treatment for voice disorders, contact the Voice Disorders Clinic at the Otolaryngology – Head & Neck Surgery Center at 206-598-4022 or on the Web at www.uwmedicalcenter.org or http://depts.washington.edu/otoweb/