

Outlook brighter for children born with cleft lip

ANN ARBOR — Seven-year-old Kristian Weierstahl looks pretty much like a normal boy his age, and plays like one, too. He especially loves soccer and air hockey. But he started out in life with a much different face than the one he has now.

Kristian was born with a cleft lip and palate, his tiny face split by gaping holes in his upper lip and the roof of his mouth. Like one in every 700 babies born today, his face didn't form quite right while he was in his mother's womb — for mysterious reasons that may never be known.

But to look at him today, you'd never know that Kristian had such a noticeable birth defect. That's because he got help from a specialized team of doctors, nurses, therapists and others at the University of Michigan Health System. Through surgery, therapy and counseling, he's been given a chance to have a normal face, and the normal physical, mental and social development that go along with it.

Had Kristian been born even a few years earlier, he might have had a much more obvious scar over his mouth, or endured more operations to get his cleft lip and palate fixed. He might even have lived with the defect his entire life. But the options for treatment and support have improved tremendously in just the past few years.

"The ability to correct cleft lip and palate has really come a long way," says Dr. Steven Buchman, who directs the Craniofacial Anomalies Program and the pediatric plastic surgery division at the U-M's C.S. Mott Children's Hospital. "Everyone has probably seen someone with terrible scarring on their lip from the way things were once done. But the techniques now are very, very good."

Buchman's team helped Kristian just as they have helped many others who have come to the UMHS program in the last 75 years after being born with cleft lips, cleft palates, or both. And, the team recently published research on the impact that such conditions have on a child's physical and psychological health, and on their families.

woman's use of certain drugs during pregnancy may be behind others. And Buchman and his U-M colleagues have found a possible link between smoking during pregnancy and an increased risk of a cleft defect.

"Cleft lip and palate can happen in a number of ways and can happen together. They're related in that they happen around the same time embryologically, when the child is being formed," Buchman says. "The lip is not just one element. It really comes together from three different places: your nose, and the outside of your face on both sides. Normally, it comes together and fuses, but in certain children, it doesn't fuse, and leaves a little crevice or cleft."

Like many birth defects, cleft lip or palate may stem from a genetic glitch or exposure to a harmful substance early in a baby's development — even before women know they're pregnant.

That's why it's so important for pregnant women to avoid drugs, alcohol, smoking and medications that might raise the risk of birth defects. Even in a baby's development, causes of cleft lip and palate haven't yet been pinned down, researchers know that this kind of careful prenatal, or "before birth," care can reduce the risk that a baby's mouth won't form correctly.

EARLY INTERVENTION

But not every case of cleft lip and palate can be prevented, even if mothers-to-be are extra careful.

For babies born with facial birth defects, it's important they get specialized attention soon after birth. A program like the U-M's, which tackles not only the physical problem but the speech, feeding, psychological and social issues surrounding it, is known to give the best result.

"Having a cleft lip both affects how you look, and how you function," Buchman explains. "It may affect speech, because the lips aren't meeting at the right place at the right time. The opening goes down to the gums, and therefore affects the ability to bite and eat."

"But perhaps the most important thing is that it can really have a significant effect on how you look," he continues. "And if you don't look like everyone else, it can really have a devastating effect psychologically on a child, which continues as they grow to be an adult."

Cleft palates, which are marked

by openings in the roof of the mouth, don't usually have an obvious impact on the face's appearance, but they can dramatically alter the way a person speaks.

"The roof of the mouth is the floor of the nose, and that separation is really important when you speak," Buchman says. "If that's not correct, air comes out the nose when you speak. And when you eat, food can come through your nose."

Babies can have surgery to start to correct a cleft lip as early as 10 weeks after they're born. The operation separates the lip from the muscles underneath, rotates flaps of tissue and muscle into a more normal place, then brings it all together in layers to make a continuous lip. In recent years, surgeons like Buchman have started to do more during the first operation to correct cleft lip and palate, which is often affected.

Cleft palate surgery isn't usually done until a baby is about a year old, to give the bones in the area time to grow before they're altered. Reaching inside the infant's mouth, surgeons work with tissue, muscle and bone from either side of the hole, and bring it together in the middle.

Additional operations may be needed as the child grows to "revise" the original result, or to expand the gums, but experienced surgeons can minimize the number of surgeries needed.

TEAMWORK

In addition to plastic surgery, children with cleft lips or palates need a range of other services that programs like the one at UMHS can provide.

Nearly 50 team members in 22 medical and dental specialties help take care of these patients, including oral and maxillofacial surgeons; orthodontists; ear, nose and throat physicians; speech and language therapists; social workers; geneticists; registered dietitians; specialized nurses; and pediatricians. It's a comprehensive team approach that's been used at UMHS for 60 years.

In addition to three operations, 7-year-old Kristian needed help with feeding when he was a baby, and still attends speech therapy sessions regularly. He'll need a bone graft to help expand his gums, but otherwise his father, Arndt Weierstahl, says he looks and speaks almost normally.

FACTS ABOUT CLEFT LIP AND PALATE

■ One out of every 700 babies born today has a cleft lip, a cleft palate, or both. More than 70 percent of babies with a cleft lip also have a cleft palate.

■ The "cleft" in cleft lip and cleft palate is a gap in the upper lip or roof of the mouth that occurs when the mouth fails to form normally during a baby's development in the womb.

■ Cleft lip, cleft palate, or a combined cleft lip and palate arises during the fifth or sixth week of pregnancy. The precise causes are not known, but certain medications, illegal drugs, alcohol, smoking and genetic defects have been found to raise the risk.

■ Cleft lip and palate is more common among Asians and certain Native American groups than among whites and African Americans.

■ Boys are more often affected by cleft lip and palate, or cleft lip, than girls. But girls are more likely to have cleft palate alone.

■ Surgery to correct cleft lip can occur as early as 10 weeks of age, but cleft palate repair is not done until around one year of age, after a child's bones have a chance to grow.

■ Children with cleft lips and palates need a range of medical, surgical, dental, speech and psychological attention. A team-based approach to coordinate that care is best.

Sources

Learn more on the World Wide Web or by phone:

■ University of Michigan Health System: Cleft Lip and Palate fact sheet www.med.umich.edu/libr/pa/pa_cleft_hhg.htm

■ U-M Congenital Anomalies Program - Pediatric Plastic Surgery www.med.umich.edu/surg/plastic/patient_family_care/pediatr/pediatr.htm

■ Cleft Palate Foundation: Web site and hotline: www.cleftline.org, or 1-800-24-CLEFT

■ FACES: The National Craniofacial Association: www.faces-cranio.org

■ March of Dimes: Cleft Lip and Palate fact sheet and hotline www.marchofdimes.com/pnhcc/68t_1210.asp or 1-888-MODIMES

Hospital tries patient-friendly radiation

As Dr. Frank Vicini, a radiation oncologist, and colleagues at Beaumont Hospital worked to develop a more patient-friendly and technologically superior way to give radiation to women after lumpectomy for early-stage breast cancer, at least one question remained unanswered: Would it take more time to plan and deliver the treatment?

Knowing that the issue of time could halt efforts for widespread use of the more complex treatment — called intensity-modulated radiation therapy, or IMRT — Vicini set out to answer that question in 1999. In a span of two years, Vicini had treated 281 women with IMRT after lumpectomy. He found IMRT to be comparable to standard therapy in terms of time, and more effective in reducing side effects.

His work is published in the December 2002 edition of the *International Journal of Radiation Oncology Biology Physics*.

IMRT kills cancer better than conventional radiation therapy because it delivers a more uniform dose of radiation throughout the entire breast. It also minimizes unnecessary radiation to the heart, lungs and other breast. In Beaumont's patients, it led to excellent or good cosmetic results in 94 women from the last 95 who were treated.

"During the past several years, we've seen significant advances in all technical aspects of radiation therapy," said Vicini. "Despite this progress breast cancer radiation therapy has changed little and has not fully exploited many of the technical advances commonly used to treat most other cancers."

Beaumont's Radiation Oncology program is one of Michigan's highest-volume treatment centers, providing about 32,700 treatments in 2001. In addition to treating people with cancer, department staff are pursuing treatment advances through research of innovative brachytherapy techniques and technology to improve accuracy in external-beam radiation.

Do you know a Farmington school student who has turned his or her life around?

Students in grades 7 - 12, who have made positive changes in their lives will be honored at a luncheon in Farmington Hills Manor on March 11, 2003.

Students will be judged on the basis of significant improvements in a broad range of areas—from behavior to school work to community service.

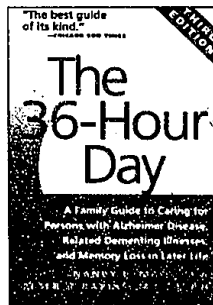
The program is sponsored by Farmington Public Schools, Farmington Observer, Farmington Public Safety Department and the Farmington Hills Police Department.

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