Facial Feminization Surgery: Aligning Face and Gender

P. Daniel Knott, MD, and Rahul Seth, MD, use their expertise as facial plastic surgeons to accomplish something of fundamental importance for patients with gender dysphoria: Drs. Knott and Seth perform facial feminization surgery (FFS) to help patients experience the world as the gender with which they associate. Specifically, FFS transforms patients’ facial features from male to female.

“This surgery is important because it allows patients to better adjust and assimilate into society and to be happier.” — Dr. Rahul Seth

Otolaryngology head and neck facial plastic surgeons are ideally suited to perform facial surgery, according to Dr. Knott. “Our training marries the functional and cosmetic. So, for example, in shaping the nose, we balance nasal breathing and dynamics with appearance.”

The procedures that Drs. Knott and Seth use at UCSF to increase perceived femininity with FFS include brow lifting, bony contour work of the forehead and jaw, rhinoplasty, face lift, neck lift, placement of implants, facial fat injection, and facial liposuction.

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Teamwork...

Teamwork is a beneficial characteristic that is prized as a contributor to group success. The worlds of sports and (dare I say it?) politics remind us of what can be achieved by driving cooperation and collegiality. In that spirit, we have been working hard to build and promote our teamwork at UCSF in order to realize the potential personal and institutional gains in three distinct ways:

...Within a Hospital Center
The Helen Diller Family Comprehensive Cancer Center at UCSF has a tremendous head and neck oncology team. Under the leadership of Patrick Ha on the ablative side and Daniel Knott on the reconstructive side, our clinical team has leveraged relationships in medical oncology through Alain Algazi, radiation oncology through Sue Yom, pathology through Annemieke van Zante and Richard Jordan, dentistry through Arun Sharma, radiology through Christine Glastonbury and Bill Dillon, and rehabilitation through Joey Laus, Jonelyn Langenstein, Erik Steele and Sky Yang, among others. Additionally, the team has partnered with Jennifer Grandis and Dan Johnson in the lab to drive basic science research. UCSF is positioned to offer patients the latest technology in treatment, from robotic surgery to radiation, while at the same time offering a chance to participate in cutting-edge research and investigation. We are highly motivated to offer patients with complicated clinical problems the most current advice and will strive to provide a facilitated and efficient environment for care at our new and state-of-the-art cancer center at Mission Bay.

...Across Hospitals
UCSF Benioff Children's Hospital Oakland and UCSF Benioff Children’s Hospital San Francisco have a team of eight pediatric otolaryngologists who work as one unit. The team at Oakland is led by Garani Nadaraja, and the team in San Francisco is led by the overall Chief of the Division, Kris Rosbe. Our otolaryngologists cover on-call issues as one unit, and each team member has privileges at both hospitals. Our quality metrics are examined as a group, and any gains that we can realize in the quality realm are rolled out to both hospitals. This pediatric OHNS team is the largest in Northern California and has expertise in cochlear implantation, airway reconstruction, head and neck tumor work, otologic surgery, voice and swallowing disorders, craniofacial disorders, and, of course, general otolaryngology problems. We have practice satellites in Walnut Creek, Marin, Brentwood, and San Ramon in addition to our practices in San Francisco and Oakland. We will soon have a resident rotation in Oakland and a new fellowship in pediatric otolaryngology in Oakland and San Francisco.

...Within a Division
Our otology/neurotology division is under the direction of Charles Limb. Charles is also the director of cochlear implantation, and he has a research unit devoted to music perception in cochlear implant patients. This work dovetails with our Coleman Lab run by Christoph Schreiner, which examines issues in central auditory processing, and our Epstein Lab run by Pat Leake, which researches cochlear physiology including the utility of genetically-based deafness therapies. The division is full service on the clinical side and includes Jeffrey Sharon, who is an expert on vestibular disorders, Aaron Tward, who is a superb clinician and who also runs a basic science laboratory, and Steve Cheung, who works both in the research environment and in skull base surgery. The team also covers our affiliate hospitals: Dr. Cheung works at the Veterans Administration Medical Center part time, and Dr. Sharon covers Zuckerberg San Francisco General Hospital part time. Wherever you send your most challenging otology patients within the tertiary environment of UCSF, you will be assured that the highest level of academically focused attention will be given by one of the highly expert members of the otology/neurotology faculty.

If you have not sent a patient with a tertiary problem to our team lately, please check us out again. We have assembled an amazingly talented group to help your patients in need.

Warmly,
Andrew H. Murr, MD
Chairman, Professor of Clinical Otolaryngology – Head and Neck Surgery, Department of Otolaryngology – Head and Neck Surgery
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Understanding Gender Dysphoria

Gender dysphoria is an adjustment disorder that occurs when birth gender does not match one’s gender identity. “Persons who have gender dysphoria have had significant difficulties dealing with this their entire life,” notes Dr. Seth. “Our hope is to decrease many of the issues and stresses that patients encounter by treating or altering the gender defining facial characteristics and matching the face to what the mind perceives using gender transformative surgery. This surgery is important because it allows patients to better adjust and assimilate into society and to be happier.”

“Those patients really struggle with their fundamental identity” explains Dr. Knott. “They feel that they have essentially been placed in a body with the wrong gender since birth, and we help them realize a life-long dream to become physically who they have always felt they are psychosocially. Our patients are on a lengthy journey, and we are privileged to be able to help them accomplish just one small part of their transformation.”

Patients who begin their gender transformation before puberty do not need facial surgery because they receive hormone therapy from an endocrinologist or other specialist. Drs. Seth and Knott care for patients who have already gone through puberty. Those post-pubertal males who undergo FFS require reductive surgery to the skeleton of the face to make it appear more feminine.

Managing Individual Considerations

The OHNS Facial Plastic Surgery Clinic receives referrals from different centers within San Francisco. Typically, patients are referred from their psychologist’s office. Patients are under medical care and have been deemed stable, healthy, and appropriate for consideration of facial surgery. A key part of the practice is working with each patient individually to focus on their specific needs.

“Patients come to us wearing makeup and wigs to make them appear feminine. This is the way they have gone about life for years – using techniques to camouflage their facial features,” says Dr. Seth. “We meet with the patient and discuss their facial features with them, deciding which features to focus on to help them appear more feminine. Ideally, this helps them better assimilate into society as a female.”

The hairline and brow are areas that are typically worked on to feminize a face. Lowering and reshaping a receding hairline typical of a male creates a characteristically female appearance. Male and female foreheads are also quite different. Female foreheads have a gentle slope without a prominent brow ridge. In males the bony ridge of the brow projects outward. So Drs. Knott and Seth often perform a surgery to reshape and contour the forehead.

“It’s a very powerful technique,” explains Dr. Knott. “A single incision on the forehead allows us to advance the hairline, raise the brows, reshape the bony ridge, and enlarge and reshape the eyes.”

In the lower portion of the face, a change in gender perception can be created by altering the shape of the nose and jaw. Rhinoplasty can be used to shape a smaller, more female appearing nose. Typically, males have a squared jaw and females have a slightly pointed jaw, so to feminize the jawbone the outside layer is shaped to a point. Fat may also be transferred from the body to the cheeks to accentuate femininity.

If the patient is older, there are additional considerations. “If you look at beauty, femininity and youthfulness are inextricably linked in society’s perception,” notes Dr. Knott. “So if you want to make someone appear more feminine you also try to make her appear more youthful.”

“We were motivated to do this surgery because of the important impact we can make for our patients,” Dr. Seth adds.

In addition to private payment for these procedures, Drs. Seth and Knott accept some insurance coverage, including the San Francisco Health Plan. “It is important that insurers are beginning to understand the social implications and suffering transgender patients have. Being able to relieve the psychological stress that can come with gender dysphoria through surgical procedures is an important tool that we are proud to provide to the community of San Francisco,” says Dr. Seth.

Dr. P. Daniel Knott is director of facial plastic and reconstructive surgery in Otolaryngology – Head and Neck Surgery at UCSF Medical Center and is an associate professor of otolaryngology at UCSF. Dr. Knott, who joined UCSF in 2011 after 10 years at the Cleveland Clinic, has training and experience in facial aesthetics and microvascular surgery. His expertise includes treatment of facial paralysis, facial rejuvenation, reconstruction of facial cutaneous malignancies, minimally invasive facial soft tissue augmentation, rhinoplasty and free tissue transfer. In his research, he is helping develop new methods for palatal and orbito-maxillary reconstruction, microvascular treatment of osteonecrosis and cartilage bioengineering. He has won several national awards for his research, which includes studies of head and neck tissue transplantation. Dr. Knott earned a medical degree at the School of Medicine at the University of California, San Diego and completed a five-year surgical residency at the Cleveland Clinic in otolaryngology – head and neck surgery. He also completed a fellowship in facial plastic and reconstructive surgery at UCLA Medical Center.

Dr. Rahul Seth is an assistant professor in the Plastic and Reconstructive Surgery division of the Otolaryngology – Head and Neck Surgery Department at UCSF. He completed fellowship training at UCLA following completion of a five-year surgical residency at the Cleveland Clinic. Board certified in Otolaryngology – Head and Neck Surgery and Facial Plastic and Reconstructive Surgery, Dr. Seth’s expertise is in the treatment of facial aesthetics and rejuvenation of the aging face, rhinoplasty and nasal airway surgery, treatment of facial paralysis, reconstruction of facial cutaneous malignancies, and free tissue transfer microvascular reconstruction of the face, head, and neck.
At UCSF Benioff Children’s Hospital Oakland (BCHO) even the most fragile newborns and the most medically complex children receive an unsurpassed level of care, and our OHNS department works in concert with the entire community of medical providers there to ensure that those children receive it,” explains pediatric otolaryngologist Jordan Virbalas, MD. He and fellow pediatric otolaryngologists Garani Nadaraja and David Conrad, MDs, are committed to providing the best in care for children in the East Bay and beyond.

“An important goal is to ensure access to high level pediatric otolaryngological care to all kids in the East Bay, a community that I grew up in and hold very dear to me,” notes Dr. Nadaraja, an assistant professor of Otolaryngology-Head and Neck Surgery, who leads the team. As an integral part of UCSF BCHO, the Otolaryngology Department offers comprehensive services that encompass the full range of pediatric otolaryngology offerings.

With experts in more than 43 distinct pediatric specialties, UCSF BCHO has a century-long tradition of protecting and advancing the health and wellbeing of children through clinical care, teaching and research. UCSF BCHO is one of two solely-designated Level One pediatric trauma centers in the region. Each year, it handles more than 45,000 emergency department visits, and it has one of Northern California’s largest pediatric intensive care units. The hospital also provides outpatient care to underserved children in much of Northern California.

A Distinguished History
The OHNS Department at UCSF BCHO has a long history, beginning in 1963, when Children’s Hospital Oakland opened its first speech and hearing center for hearing aid consultation, one of three in the entire East Bay. UCSF’s OHNS Department was also involved over many years in the Children’s Hospital Oakland comprehensive program for newborn hearing loss screening. That program enables audiologists to identify congenital hearing loss within just weeks of a child’s birth.

In 2014 Children’s Hospital & Research Center Oakland affiliated with UCSF Benioff Children’s Hospital San Francisco in Mission Bay. Since then the Oakland and Mission Bay campuses have embarked on a partnership to broaden the combined expertise to both sides of the bay. While the degree of integration varies between departments, OHNS has provided a model for complete integration. Examples of this close partnership include having OHNS fellows experience both sites. In addition, joint participation includes the vascular anomalies conference, aerodigestive conference, hearing loss clinic, and frequent resident didactic and case conferences.

Continued Collaboration
“We aim to create a seamless pediatric OHNS system that provides excellent patient care and advances our core goals of innovation and research at both sites,” explains Dr. Conrad. “It is important to build on current partnerships through continued collaboration and multidisciplinary conferences.”

While some multidisciplinary conferences remain site-specific, UCSF BCHO pediatric otolaryngologists are working to expand the joint cochlear implantation program and are excited to have resident and fellow participation in

New Appointment
Charles Limb, MD, has been appointed Medical Director of Cochlear Implantation at UCSF Benioff Children’s Hospital, Oakland.

Dr. Limb is currently the Francis A. Sooy Professor and Chief of the Division of Otology, Neurotology, and Skull Base Surgery at UCSF. He is also the Director of the Douglas Grant Cochlear Implant Center at UCSF.

“With this appointment, the cochlear implant programs throughout UCSF are now unified under Dr. Limb’s leadership, building upon the legacy of UCSF as one of the pioneers in the field of cochlear implantation,” said Department Chairman Andrew H. Murr, MD, who announced the appointment with David Durand, MD, and Steven Wilson, MD.

A graduate of Harvard College and Yale School of Medicine, Dr. Limb trained at Johns Hopkins in Otolaryngology – Head and Neck Surgery and completed a fellowship in neurotology there before becoming a full-time faculty member in 2003. He also completed post-doctoral training at the NIH in functional neuroimaging. Dr. Limb is an expert in complex sound perception in cochlear implantation and the neuroscience of music, and he has lectured worldwide on this topic.
In announcing plans for Drs. Nicholas Dewyer, Jonathan Overdevest and Matthew Tamplen, Chair Andrew Murr, MD, noted with pride that “three of our chief residents have been placed into stellar fellowships.”

In July 2017, Nicholas Dewyer, MD will join the Neurotology Fellowship program of the Harvard Medical School Department of Otolaryngology at Massachusetts Eye and Ear Infirmary. Dr. Dewyer will complete his five-year OHNS residency at UCSF in June 2017. He attended medical school at the University of Michigan in Ann Arbor, where he also completed his undergraduate degree in Biomedical Engineering. “There are many things that I appreciate from my residency at UCSF, but foremost are the people with whom I’ve had a chance to work,” noted Dr. Dewyer. “I don’t think there is a better group of residents and faculty anywhere.”

“It has been a stellar learning environment, with passionate mentors, and opportunities for growth within a continually adaptive health care system,” noted Jonathan Overdevest, MD, PhD, who will complete his five-year residency program in June 2017. He will begin a Rhinology and Skull Base Surgery Fellowship in Stanford University’s Department of Otolaryngology – Head and Neck Surgery in July. “Camaraderie and compassion resonate as instrumental ingredients provided by our program throughout my training experience at UCSF OHNS. Faculty here have been supportive of our development into autonomous clinicians, more than simply training us to be reliable residents,” said Dr. Overdevest, who completed his medical degree, PhD and MS at the University of Virginia, Charlottesville after earning his undergraduate degree from Cornell University, College of Arts and Sciences, in Ithaca, New York.

After completing his five-year OHNS residency program at UCSF, Matthew Tamplen, MD will begin a Facial Plastic and Reconstructive Surgery Fellowship at the University of South Florida, Tampa, in July. Dr. Tamplen observed that “at UCSF I was able to receive high quality training in all aspects of facial plastic surgery, including some of the most difficult reconstructive cases. UCSF provides only the most cutting-edge and evidence-based care from some of the best surgeons in the country.” Dr. Tamplen received his medical degree from UCLA David Geffen School of Medicine. He completed his undergraduate degree in Biochemistry and Molecular and Cellular Biology from the University of California, Davis.
By Josephine Czechowicz, MD, Clinical Assistant Professor in the Pediatric Otolaryngology – Head and Neck Surgery Division

As I embark on my academic career as one of the newest members of the OHNS faculty, I hope to take a leadership role in the international arena as an advocate for including pediatric ear, nose and throat health concerns in the overall global health agenda.

My interest in pediatric otolaryngology began during my third year of medical school. Taking care of children with ear, nose and throat issues resonated with me in a way no prior clinical experience had. There were the moments of life-saving heroism, where a level head and sure hands could establish an airway in an obstructed infant. There were the routine procedures, like adenotonsillectomy, that dramatically improved the quality of life of an otherwise healthy child with obstructive sleep apnea.

Most impressive to me were the interventions that helped children develop speech and language – from the miracle of cochlear implantation, to placing PE tubes and instantly curing years of conductive hearing loss, to meticulous palate procedures to correct VPI and allow a child's speech to be understood. Furthermore, I saw that working with children and families required a unique sensitivity, and it also offered profound rewards. To earn the trust of a terrified family and to apply skills and expertise to make a broken child whole – for me this is what the art of medicine is all about. After these experiences, I knew I wanted to be a pediatric otolaryngologist.

That was 2007. Soon after, I had the opportunity to unite my long-standing passion for global health with my burgeoning interest in pediatric otolaryngology. I had previously done clinical research in Chile and Equatorial Guinea, but I wanted to do something more in-depth with greater impact. In 2008 I was awarded an NIH-Fogarty International Clinical Research Scholarship and spent a research year in Lima, Peru, designing and conducting the country's first epidemiologic survey of hearing impairment and ear disease in children. We collected audiometric data on a population of kids living in the Puente Piedra shantytown north of the capital city of Lima. The basic conclusion of the project—that children in Peru have three to five times more hearing impairment than children in developed countries, largely due to a lack of primary ear care—affirmed my desire to pursue an academic career integrating my ongoing commitment to global health research.

Throughout residency, I continued my studies of pediatric ear health in Peru. I collaborated with Peruvian colleagues to publish the first study of the prevalence of hearing loss in children living with HIV. Later, in partnership with a bioengineer and a specialist in health care design, we were awarded a Center for Innovation in Global Health seed grant to study the implementation of newborn hearing screening in resource-limited settings in Lima. I worked with otolaryngologists, ministry of health officials and parents of children with hearing loss to develop a holistic understanding of the resources and challenges for implementing a universal newborn screening program. My current project in Nairobi, Kenya seeks to better characterize hearing outcomes in babies born with HIV-CMV co-infection. I am also becoming involved with ongoing capacity-building projects at the UCSF Center for Global Surgical Studies.

These activities align well with my lifetime goal of making an impact on improving ear, nose and throat health for children throughout the world.
The Boles Library now holds a magnificent trophy, which a team from UCSF OHNS was awarded for its commanding Resident Bowl victory during the Combined Sections Triological Society Meeting January 19-21 in New Orleans.

Approximately 500 academic and community-based otolaryngologists heard a variety of speakers and panelists during the comprehensive program. A highlight was a presentation by UCSF OHNS Chief Resident Nicholas Dewyer, MD, who received the prestigious Shirley Baron Award for giving the most significant presentation in the Western Section portion of the meeting.

Dr. Dewyer discussed “Automated Smartphone Audiometry: Validation of a Word Recognition Test Program,” which described an app created to test hearing loss and word recognition. The app was able to reach congruence with standard clinical audiometry with 86 percent of the data points within an acceptable margin of error when the app was directly compared with standard audiometric testing. Charles Limb, MD was the senior author on the project.

Dr. Dewyer was joined by fellow residents Matt Tamplen, MD, and Molly Naunheim, MD, on the UCSF team that won the Resident Bowl, a quiz session designed to test wide-ranging Otolaryngology-Head and Neck Surgery knowledge during the meeting. The UCSF team, which led the contest from the very first question, defeated teams from 15 other residency programs.

Andrew N. Goldberg, MD, MSCE, FACS, Vice President of the Triological Society’s Western Section, hosted the successful meeting.

Andrew Goldberg, MD, with Bert W. O’Malley Jr., MD, Eastern Section Vice President, David J. Terris, MD, Southern Section Vice President, and Michael S. Benninger, MD, Middle Section Vice President. President Charles Beatty, MD, is at the lectern.

Nick Dewyer, MD, recipient of the Shirley Baron Award, with Jolie Chang, MD

Andrew Goldberg, MD, with two of his key mentors whom he honored at the meeting: Drs. Eugene Myers and Jonas Johnson from the University of Pittsburgh

The Resident Bowl Trophy is on display in the Boles Library.
Upcoming Events

15th Annual Resident Research Symposium
June 16, 2017, 1:00–5:00 pm
UCSF Mission Bay, Byers Auditorium in Genentech Hall, San Francisco, CA

The Annual Francis A. Sooy, MD Lectureship
June 17, 2017, 7:30 am–Noon
Speaker: Michael G. Stewart, MD, MPH, Weill Cornell Medical College
UCSF Mission Bay, Byers Auditorium in Genentech Hall, San Francisco, CA

Sooy Society Alumni Reception at the AAO/HNS Academy Meeting
September 10, 2017, 6:00–8:00 pm
Chicago Yacht Club, 400 East Monroe Street, Chicago, IL

The Roger Boles, MD Lectureship
September 21, 2017, 5:00–6:45 pm
Speaker: James L. Netterville, MD, Vanderbilt University
Location TBA

Otolaryngology Update 2017
November 2-4, 2017
Palace Hotel, San Francisco, CA

The Robert Schindler, MD Lectureship
December 7, 2017, 5:00–6:45 pm
Speaker: Nancy M. Young, MD, Northwestern University
Location TBA

24th Annual Advances in Diagnosis and Treatment of Sleep Apnea and Snoring
February 16-17, 2018
Grand Hyatt Hotel, San Francisco, CA

Pacific Rim Otolaryngology – Head and Neck Surgery Update Conference
February 17-20, 2018
Moana Surfrider Hotel, Waikiki Beach, Honolulu, HI

For further information about CME courses, please go to http://cme.ucsf.edu.
For information on Ground Rounds and departmental events, please visit http://ohns.ucsf.edu or contact Linh Nguyen at linh.nguyen@ucsf.edu.