

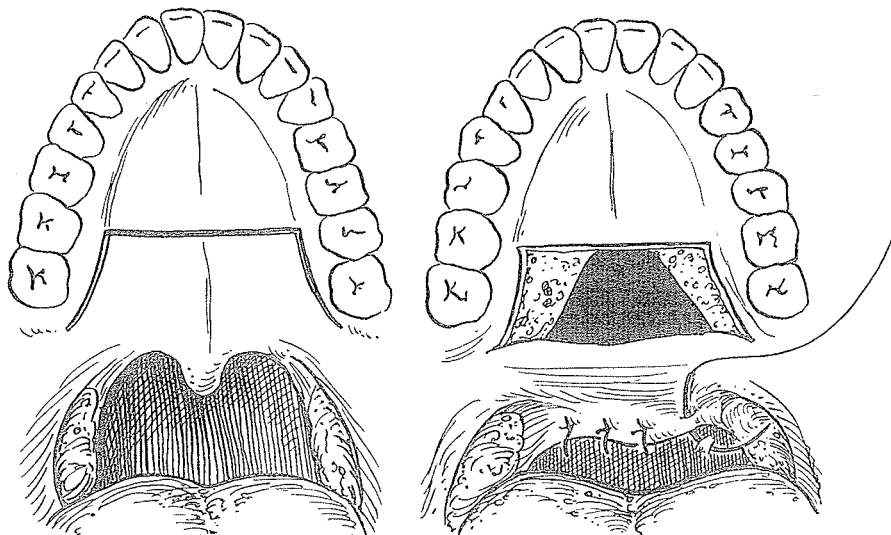
## 25. *Early Crude Palatal Pushbacks; Transverse Releasing Incisions*

### ROUX

IN 1825 Roux used a transverse incision on each side of the cleft through full thickness of the velum, extending outward to the pterygoid plate. This released the palate from its attachment to the palatal plates and facilitated closure of the soft palate cleft.

### PASSAVANT

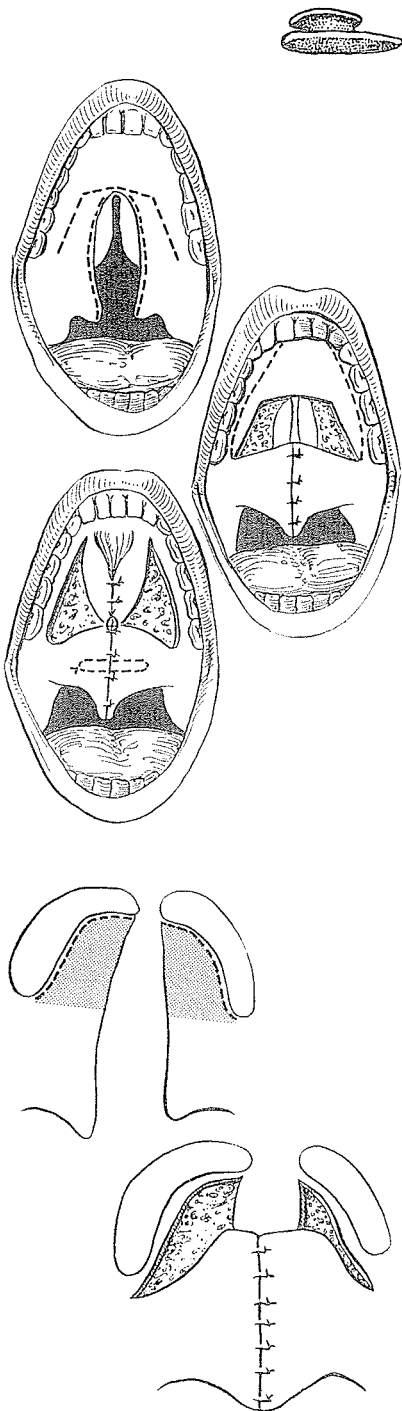
In 1878 Passavant designed a pushback of the palate. Lateral incisions 1 inch long on each side mesial to the hamular process and running forward parallel with the alveolar margin were



joined with a transverse incision across the palatal mucoperiosteum. The quadrilateral flap thus inscribed was freed from the underlying bone. The entire velum was displaced backward and held with sutures to the posterior pharyngeal wall. Defects in the hard palate were closed at a subsequent operation and, according to Passavant, this procedure produced satisfactory results. Yet he eventually turned to an obturator.

In 1879 Passavant advanced the velum backward by a transverse buttonhole incision maintained with a stud-shaped obturator similar to the collar-button obturator previously designed and used by Gariel.

In 1886 Gussenbauer is reported to have made a transverse through-and-through incision at the junction of the soft and hard palates which he closed longitudinally.



#### SMITH

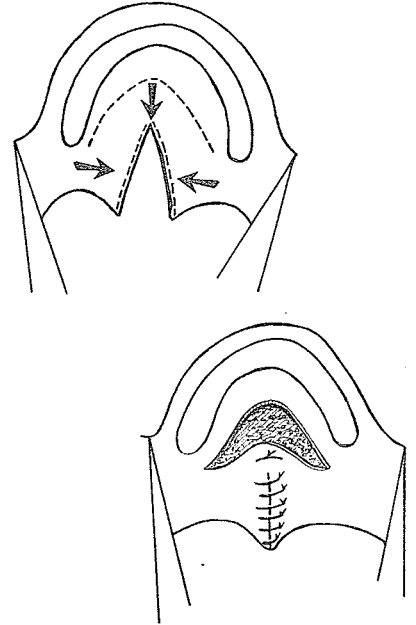
H. L. Smith of Nashua, New Hampshire, did a palate pushback procedure in 1895 that permitted the velum to touch the pharynx. Two mucoperiosteal flaps with their bases posterior were dissected from the bone and cut free from the edge of the hard palate to allow a true lengthening. The edges of the cleft velum were freshened and joined by sutures in the posterior position. The remaining mucoperiosteum was freed as two flaps, based anteriorly, and swung medially to unite in the midline and join the pushback flaps. This was the precursor of the four-flap pushback of Wardill.

#### GRIFFITHS

Another pushback, by Joseph Griffiths of Cambridge, England, in 1913 separated the mucoperiosteum from the hard palate, carrying the lateral incisions right forward until they reached the edge of the cleft alveolus. They were united after paring without tension, but the surgeon was not concerned that these loose flaps did hang down onto the tongue for a time. This and the pushback of Smith are the predecessors of the V-Y.

## ROBERTS

In 1918 J. B. Roberts of Philadelphia used a curved incision across the palate vault in the region of the canine teeth and elevated the mucoperiosteum, freeing the velum. The mucoperiosteal apron thus furnished, suspended from the hamular processes, allowed the velum to be displaced backward like a sling and held with sutures. This was a predecessor to the Dorrance horseshoe-shaped pushback.



## GILLIES AND FRY

The best known of the early true pushback operations was that of Gillies and Fry. In 1919 when Gillies first became interested in cleft palate, there were three methods in general use: Lane, Brophy and von Langenbeck. On his first visit to study Lane's work, Gillies gazed with awe at the skill of this master. On subsequent visits he began to see that the large raw mucosal flaps turned to close the gap were responsible for a tight, scarred palate, maxillary distortion and poor speech. Brophy's principle of compression did not appeal to Gillies because he had already abandoned the concept of pulling together an otherwise normal arch in order to close the maxillary gap, and even then it was evident that unoperated palates had relatively normal occlusions of the uninvolved teeth. The von Langenbeck operation produced a short palate which was too tight in wide clefts.

By this time his dental friend Kelsey Fry, who had joined him at the Plastic and Jaw Unit at Aldershot, England, had demonstrated the ease and efficiency of dental closure of traumatic gaps in the upper jaw.

Before joining Gillies, Fry had had a pretty lively time as a regimental medical officer in the front lines during World War I, receiving the Military Cross and eventually a knighthood. As Gillies and I wrote in 1957:

At Festubert, he dragged a wounded colonel across no man's land, picking up a sniper bullet in his own arm. Then he experienced a tragedy which probably had a part in saving many a life thereafter. A young lieutenant, who had his jaw blown out during a night raid, staggered into the dugout

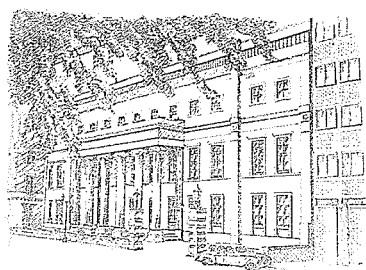
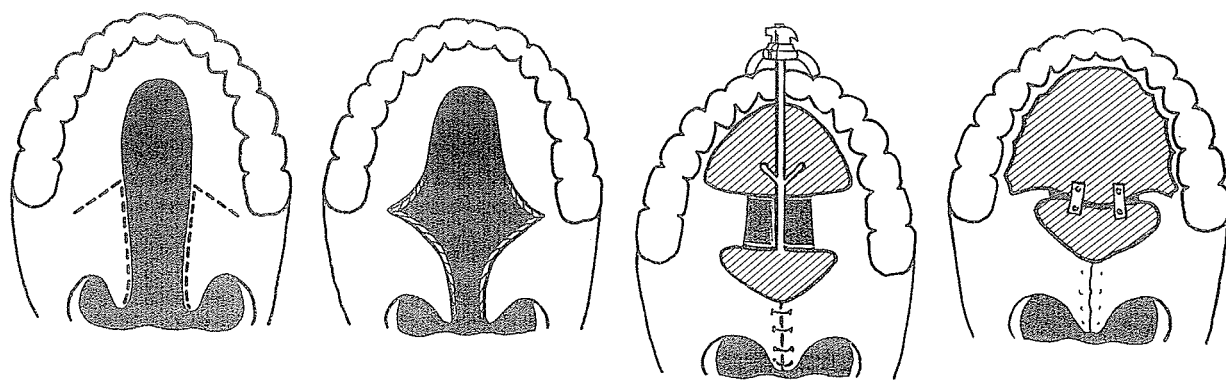


*Sir Kelsey Fry*

soaked in blood. Captain Fry led him along the trench to the aid station, forcing the lieutenant to lean on him, keeping his head forward to allow blood and bits of bone to fall free of his airway. The lieutenant was turned over to the medical orderly and as his condition seemed good, Fry started back up the trench. He had not gone fifty yards when word came the lieutenant was dead! Investigation revealed the lieutenant had been laid on his back on a stretcher and died immediately of respiratory obstruction. Fry had to wrap him in a blanket and bury him in the mud that night.

He subsequently started a warning campaign to the troops about the *importance of keeping the face down and the airway open in mouth and jaw wounds, just as recovery room personnel today care for postoperative cleft palate patients.*

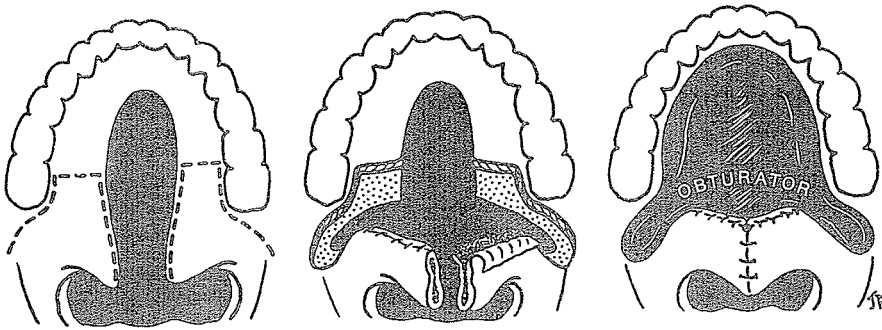
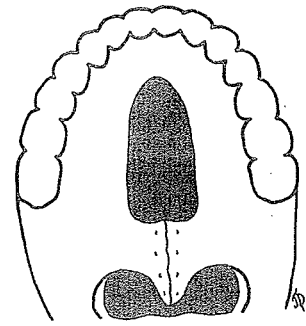
Gillies and Fry worked together in friendly cooperation during the rest of the war and were responsible for many advancements in plastic surgery. After the war they set out together to try to design a combined method that might let the cleft palate patient not only *speak well* and *eat well* but *look well*. They published their pushback operation in 1921. By separating the soft palate halves at their junction with the hard palate, but retaining the levator action, Gillies pushed back these halves as far as possible and joined them into a new soft palate able to touch the pharynx in an efficient sphincter. Fry constructed an immediate apparatus to stretch the soft palate during the healing phase and later covered the hard palate defect with a plate and fitted an obturator in the gap between the hard and soft palate.



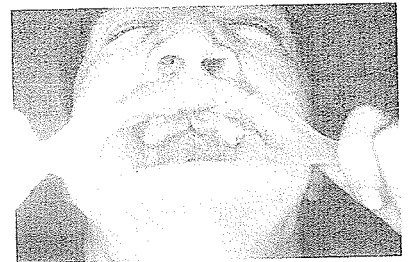
Their first patient was Bill Booker, who got a 100 percent speech result. Twenty-nine years later, Sir Harold Gillies was scheduled to speak on cleft palate at a meeting at the Royal College of Surgeons, Lincoln's Inn Fields, London. He sum-

moned Booker and secretly planted him in the back of the audience. At the end of the lecture Gillies called on Booker at the back of the room, and they had a to-and-fro conversation during the entire extent of which not one honorable medical member suspected this man of having a cleft palate. Finally Booker removed Fry's great obturator and passed among the astounded crowd with his mouth wide open, revealing the large hole.

Subsequent refinements which reduced contracture and produced more mobile soft palates included mucosal flaps turned off the hard palate to be folded over the posterior edge of the soft palate and Thiersch grafts on a gutta-percha dental mold to cover the raw areas on the hard palate.



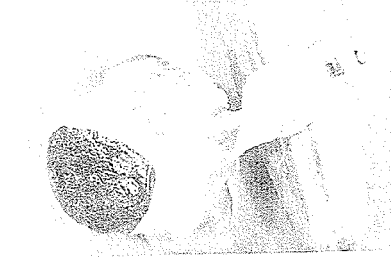
When I joined Gillies the first time in 1948, he let me do a Gillies-Fry pushback on a short, scarred secondary palate in a veteran who had been the British Army lightweight boxing champion during the Egyptian and Italian campaigns. After a cap splint had been fitted (A), the soft palate was divided from the hard palate along its posterior edge, producing a gaping hole (B). An obturator carrying a split-skin graft, raw surface out (C), was fixed into the hole, and later an obturator was constructed to fill the hole and maintain the soft palate pushback (D).



A



B



C



D

The method definitely pushed the soft palate back with greatly increased length, but, obturator or not, I hated the hole. Of course, the main drawback to the Gillies-Fry procedure was the necessity of an obturator. Gillies admitted there were pros and cons, and two cases are cited.

*Pro*

The enormous weight of the obturator and denture required by the Gillies-Fry pushback in one woman golf champion, besides providing nearly perfect speech, perhaps helped her keep her head down in putting and her eye on the ball!

*Con*

There was one patient who had had a Gillies-Fry pushback and a Wardill pharyngoplasty, but the boy's speech, particularly the sibilants, did not improve according to expectations. He could blow a trumpet, but his inability to reach certain high notes was extremely trying to listeners. Gillies recalled in 1953:

Then in the North African desert in 1945, his obturator broke and the Engineer Corps sent it back to him with a marked ridge at the weld,  $\frac{3}{4}$  inch back from the centre of his teeth. This was the very "talking point" his tongue had been looking for—his speech is now almost perfect.



One case of a Gillies-Fry procedure remains unforgettable. The patient's name was Ernie Jackson, and the case history began during St. George's Grand Challenge Cup at Sandwich, England, where in a field of 80 Harold Gillies tied Roger Wethered. They were playing it off on Sunday and broke even the first two holes. The tension was mounting as there came a holdup at the third tee. During this temporary delay the local doctor came out of the spectators and, sidling up to Gillies, whispered:

Would you mind, sir, having a look at one of my patients?

This is Gillies' account as he reminisced years later:

As there seemed to be some time before we could tee off, I went with the doctor to meet Ernie, who was a 15-year-old caddy with a very tight upper lip.

During the introduction, Ernie hung his head and mumbled a greeting through his nose. Without looking into his mouth, Gillies could imagine the short scarred palate, trying in vain to reach the pharynx. Eventually, a buccal inlay freed Ernie's lip and nose, a Gillies-Fry pushback freed his palate and a denture with an obturator had a remarkable effect on his speech. As Gillies recalled:

From that time forth, I was never allowed to golf in the vicinity of Sandwich without Ernie as my amended caddie.

In fact, Tom Webster, celebrated British cartoonist and friend of Gillies, combined Gillies' famous high tee with Ernie the caddie in a 1924 sketch.

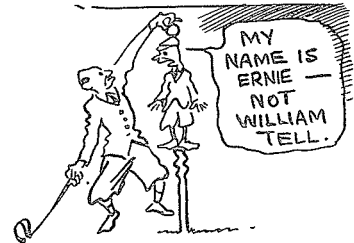
Then more sophisticated pushbacks achieved lengthening without an obturator and Gillies saw his procedure discarded like an old shoe. He admitted in remorse:

I felt that I had unnecessarily condemned my palates to an obturator life with all its attendant difficulties.

Thus, when Gillies began putting tube pedicles into the palate in the early 1950's, we wrote:

One obvious group of tube pedicle candidates are all Gillies-Fry cases, condemned to wear a huge obturator, which necessitates constant dental supervision, irritates the nose, often lodges food and, when the teeth are gone, will not stay up in position. . . . While the dental obturator is in, the patient may be the life of the party, but upon its removal he becomes a social outcast.

After over four decades of brilliant service to his country and the College, one might expect that following his death Sir Harold Gillies' portrait would be hung in the front hall of the Royal College of Surgeons, along with such of his friends as Sir Gordon Gordon-Taylor. Yet Gillies, only able to suffer formality for short periods and always game for a good-humored prank or a pint of bitters with the boys, would not have had it that way. Thus, if you climb several flights of stairs and pass through numerous back corridors, you will come upon a bar frequented by Fellows in the College and most often by the younger mem-



*Sir Harold Gillies*

bers. It is here that Howard Barron's portrait of Sir Harold hangs, and on his right is the portrait of Lord Nuffield, a longtime friend of his and of plastic surgery.

The other member of this dynamic duo, Sir Kelsey Fry, with his skill at constructing effective obturators, made primary veloplasty possible but saved many maxillae from collapse. Margaret Hotz recalled how he had said that if he had a cleft, he would want the soft palate closed but would allow the hard palate closure *only* if it caused no forward pull on the velum. During his later years Fry found great enjoyment in growing carnations—not the usual odorless reds and whites sold commercially, but special ones giving off especially fine perfume.