

GORTEX THYROPLASTY

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STEP 1 MARK THE INCISION

Palpate for the thyroid cartilage.

Identify the thyroid notch, midline and inferior border of thyroid cartilage.

Figure 1

STEP 2 EXPOSE THE THYROID CARTILAGE

A transverse skin crease incision 5 cm long is made at the level of mid-thyroid cartilage from the midline towards the posterior border of thyroid cartilage.

Small superior and inferior skin flaps are raised in the subplatysmal plane.

The sternohyoid and thyrohyoid muscles are divided to expose the thyroid lamina from the midline to the oblique line (where the sternothyroid muscle inserts).

The bare cartilage of the thyroid lamina is exposed by incising and elevating a rectangular and inferiorly based perichondral flap down to the inferior border of thyroid cartilage using a Freer's dissector.

STEP 3 OPENING A WINDOW IN THE THYROID CARTILAGE

From the midpoint between the thyroid notch and lower border of the thyroid cartilage in the midline, draw a line, parallel to the inferior border of thyroid lamina, posteriorly towards the oblique line (this approximates the level of vocal cord)

Using a 4 mm cutting burr followed by a diamond burr, open a small window in the thyroid lamina, 1 cm from midline (parallel to the above line) and 4 mm above inferior border of thyroid lamina. Ensure the inner perichondrium remains intact. **Figure 2**

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Then pass a duck-bill dissector (otological instrument) via the window, hugging the inner table of the thyroid cartilage, and dissect and create a subperichondrial pocket on the inner side of thyroid lamina.

STEP 4 AUGMENTATION WITH GORTEX STRIP

Fashion the Gortex into a 2 mm strip and insert it into the inner pocket until optimal voice or endoscopic confirmation of adequate medialization is achieved.

Figure 3

Trim the excess Gortex, then reposition the perichondrial flap and repair the strap muscles. A small wound drain can be inserted.

Then close the wound in 2 layers.

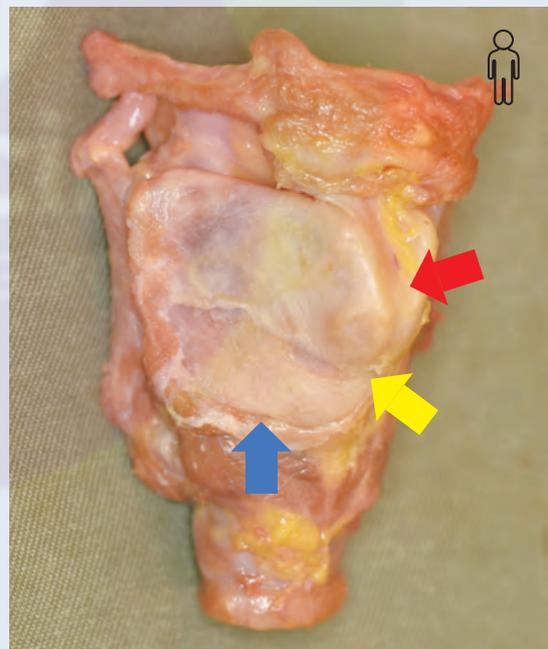


Figure 1

Thyroid notch (red arrow), midline (yellow arrow) and Inferior border (blue arrow)

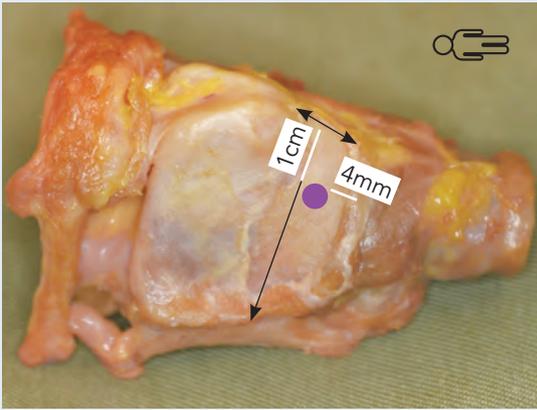


Figure 2
Landmarks for cartilaginous window

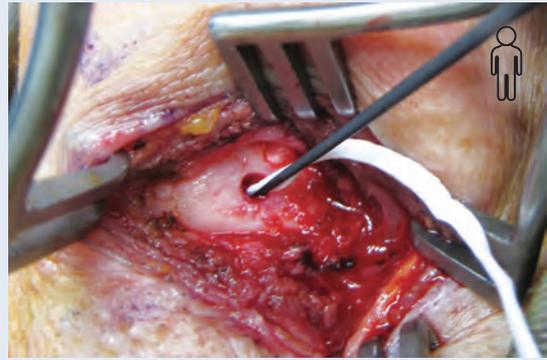


Figure 3
Augmentation with Gortex strip assisted with duck bill dissector

KEY POINTS

1. Identify the thyroid notch, midline and inferior border of thyroid cartilage.
2. Expose the inferior border and midline of thyroid cartilage.
3. Identify the landmarks to create the cartilaginous window.
4. Create a subperichondrial pocket on the inner side of thyroid lamina.
5. The adequacy of augmentation is guided by the voice quality and endoscopic observation of the position of the vocal cords.