

# Fascia lata

**Fascia** lata is a validated source of **autografts**, adopted by many surgical figures throughout different types of reconstructive procedures. Postoperative pain and muscle prolapse are frequent complications after harvesting fascia lata; donor site morbidity causes delayed mobilization and increased length of hospital stay.

Multi-layer skull base reconstruction can be performed by pedicled middle turbinate mucosal flap combined with fascia lata, **dural substitute**, fat and other reconstruction materials <sup>1)</sup>.

A banked fascia lata graft proved reliable and safe in providing an effective sellar dura reconstruction. Used in a multilayer strategy, it should be considered a viable alternative to an autologous fascia lata graft <sup>2)</sup>.

In the Surgical Department, Neurosurgical Unit, Azienda Ospedaliera SS. Antonio e Biagio e Cesare Arrigo, Via Venezia 16, 15121 Alessandria, Italy fascia lata is used as autologous graft in reconstruction of **skull base** after **extended endoscopic transsphenoidal approach** (EETS) and the thigh defect is usually repaired with allograft to restore tissue continuity and avoid muscle prolapse.

The aim was to evaluate the post-operative pain and muscle prolapse in a group of patients who underwent EETS with fascia lata reconstruction with **allograft**.

They retrospectively analyzed clinical data of 11 patients who underwent harvesting and reconstruction of fascia lata during EETS, collected in the department of Neurosurgery between January 2012 and September 2015. "Pain on rest" and "pain on walking" data were collected daily according to the Numerical Rating Scale (NRS) system, during hospital stay until sutures removal and 1 month after surgery. Furthermore, the degree of muscle prolapse was analyzed at the time of sutures removal and 1 month following surgery.

11 patients were studied between January 2012 and September 2015: 4 men and 7 women (1:1.75). Mean age  $53.6 \pm 11.1$  years. During the post-operative stay, "pain on rest" and "pain on walking" values of all patients did not exceed grade 4 of NRS. While removing sutures, "pain on rest" resulted grade 1 of NRS in 27.3% (3/11) patients, while "pain on walking" was grade 1 of NRS in 18.2% (2/11) and grade 2 in 9.1% (1/11). After a month of surgery "pain on rest" reduced to NRS grade 1 in 9.1% (1/11), while patients NRS results for "pain on walking" were the same as the previous evaluation. Mean duration of hospital stay was  $5.7 \pm 2.28$  days. 10 patients were discharged home, only 1 patient was transferred to a rehabilitation ward. No visible nor palpable muscle prolapse was found in the group of patients during the entire assessment.

Findings show how fascia lata reconstruction with allograft reduced post-operative discomfort and muscle prolapse in our serie; it also permitted their early mobilization and discharge. These are promising results. However further studies are needed to see this technique approved <sup>3)</sup>.

<sup>1)</sup>

Wang X, Zhang X, Hu F, Yu Y, Gu Y, Xie T, Ge J. Middle Turbinate Mucosal Flap in Endoscopic Skull Base Reconstruction. Turk Neurosurg. 2016;26(2):200-4. doi: 10.5137/1019-5149.JTN.6250-12.0. PubMed PMID: 26956812.

<sup>2)</sup>

Fiorindi A, Giofrè G, Boaro A, Billeci D, Frascaroli D, Sonogo M, Longatti P. Banked Fascia Lata in Sellar Dura Reconstruction after Endoscopic Transsphenoidal Skull Base Surgery. J Neurol Surg B Skull Base. 2015 Aug;76(4):303-9. doi: 10.1055/s-0035-1547364. Epub 2015 Apr 6. PubMed PMID:

26225321; PubMed Central PMCID: PMC4516733.

<sup>3)</sup>

Vitali M, Canevari FR, Cattalani A, Grasso V, Somma T, Barbanera A. Direct fascia lata reconstruction to reduce donor site morbidity in endoscopic endonasal extended surgery: a pilot study. Clin Neurol Neurosurg. 2016 Mar 7;144:59-63. doi: 10.1016/j.clineuro.2016.03.003. [Epub ahead of print] PubMed PMID: 26978684.

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