

# 사체를 이용한 아래눈꺼풀지방의 해부학적 연구

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**목적** : 사체 해부를 통하여 아래눈꺼풀 안와지방의 해부학적 구조 및 주변 구조물과 상관 관계를 살펴보고자 하였다.

**대상과 방법** : 사체 23구 41안을 대상으로 하였으며, 남성이 12구 20안, 여성이 11구 21안이었다. 피부와 눈돌레근을 제거하고 안와사이막을 열어, 지방의 개수와 분포한 모양을 관찰하였고 좌우 대칭성을 조사하였다. 각 지방조직의 너비, 하안와연 및 아래눈꺼풀에서 각 지방조직의 상연까지의 거리를 측정하였고 내측과 중앙 지방사이에서 하사근이 최초로 보이는 지점을 확인한 후 아래눈꺼풀에서 하사근까지의 거리와 내측 지방의 상연에서 하사근까지의 거리를 측정하였다.

**결과** : 내측 지방의 너비는  $11.49 \pm 2.54$  mm, 중앙 지방의 너비는  $21.78 \pm 5.69$  mm, 외측 지방의 너비는  $17.94 \pm 4.99$  mm였다. 하안와연에서 내측 지방의 상연까지의 거리는  $8.13 \pm 2.72$  mm, 중앙지방까지의 거리는  $9.91 \pm 3.44$  mm, 외측 지방까지의 거리는  $9.58 \pm 3.76$  mm이었다. 아래눈꺼풀에서 내측지방까지의 거리는  $5.55 \pm 1.22$  mm, 중앙지방까지의 거리는  $7.09 \pm 3.22$  mm, 외측지방까지의 거리는  $5.41 \pm 3.07$  mm였다. 하사근과 내측 지방의 상연까지의 거리는  $9.09 \pm 2.63$  mm 였고, 하사근과 아래눈꺼풀까지의 거리는  $13.60 \pm 2.27$  mm 이었다.

**결론** : 한국인에서 아래눈꺼풀 지방의 정상 해부학적 구조에 대한 이해를 돕고 아래 눈꺼풀 성형술 및 아래 안와수술시 유용한 지표를 제시한 것으로 사료된다.

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## 참고문헌

- 1) Zide BM. Surgical anatomy around the orbit. Philadelphia: Lippincott, 2006;43-89.
- 2) Hugo NE, Stone E. Anatomy for a blepharoplasty. Plast Reconstr Surg 1974;53:381-3.
- 3) Goldberg RA. Transconjunctival orbital fat repositioning: transposition of orbital fat pedicles into a subperiosteal pocket. Plast Reconstr Surg 2000;105:743-8.
- 4) Hamra ST. The role of orbital fat preservation in facial aesthetic surgery. Clin Plast Surg 1996;23:17-28.
- 5) Barker DE. Dye injection studies of orbital fat compartments. Plast Reconstr Surg 1977;59:82-5.
- 6) Castaneres S. The lateral fat compartment of the lower eyelid. Aesthetic Plast Surg 1983;7:27-30.
- 7) Beard C. Cosmetic blepharoplasty: anatomical consideration. Trans Am Acad Ophthalmol Otolaryngol 1969;73:1141-9.
- 8) Hwang K, Kim DJ, Chung RS. Pretarsal fat compartment in the lower eyelid. Clin Anat 2001;14:179-83.
- 9) Yousif NJ, Sonderman P, Dzwierzynski WW, Larson DL. Anatomic considerations in transconjunctival blepharoplasty. Plast Reconstr Surg 1995;96:1271-8.
- 10) Jordan DR, Anderson RL, Thiese SM. Avoiding inferior oblique injury during lower blepharoplasty. Arch Ophthalmol 1989;107:1382-3.
- 11) Oh CS, Chung IH, Kim YS, et al. Anatomic variation of the infraorbital compartment. J Plast Reconstr Aesthet Surg 2006;59:376-9.
- 12) Lim WK, Rajendran K, Choo C-T. Microscopic anatomy of the lower eyelid in Asians. Ophthal Plast Reconstr Surg 2004;20:207-11.
- 13) Mowalavi A, Neumeister MW, Wilhelmi BJ. Lower blepharoplasty using bony anatomical landmarks to identify and avoid injury to the inferior oblique muscle. Plast Reconstr Surg 2002;110: 1318-22.

=ABSTRACT=

## An Anatomic Study of the Infraorbital Fat Compartments in

## Adult Cadavers

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**Purpose:** This study investigated the anatomy of infraorbital fat and the relationship between surrounding structures and infraorbital fat.

**Methods:** Forty-one orbits from adult Korean cadavers were dissected. Among them 20 orbits were male and 21 orbits were female. The cadavers were perfused and embalmed in formalin solution. The skin and orbicularis oculi muscle were dissected to expose the arrangement and compartments of infraorbital fat. A punctal probe was used to find a deeper fat compartment lying under the another compartment. The width of each compartment and the distances from the inferior orbital rim and from the lower lid margin to the topmost point of each compartment were measured using a digital caliper. The distance from the top of the medial compartment and lower lid margin to the first appearance of the inferior oblique muscle, located between the medial and the central fat compartments, were measured, respectively.

**Results:** The width of the medial compartment was  $11.49 \pm 2.54$  mm, the central compartment was  $21.78 \pm 5.69$  mm, and the lateral compartment was  $17.94 \pm 4.99$  mm. The distance from the inferior orbital rim to the medial compartment was  $8.13 \pm 2.72$  mm, to the central compartment was  $9.91 \pm 3.44$  mm, to the lateral compartment was  $9.58 \pm 3.76$  mm. The distance from the lower lid margin to the medial compartment was  $5.55 \pm 1.22$  mm, to the central compartment was  $7.09 \pm 3.22$  mm, and to the lateral compartment was  $5.41 \pm 3.07$  mm. The distance from the inferior oblique muscle to the medial compartment was  $9.09 \pm 2.63$  mm, and to the lower lid margin was  $13.60 \pm 2.27$  mm.

**Conclusions:** Our study evaluates the normal anatomy of the infraorbital fat compartments in Korean patients and suggests a useful index for lower blepharoplasty and lower orbital surgery.

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**Key Words:** Anatomy, inferior oblique muscle, infraorbital fat, lower lid

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