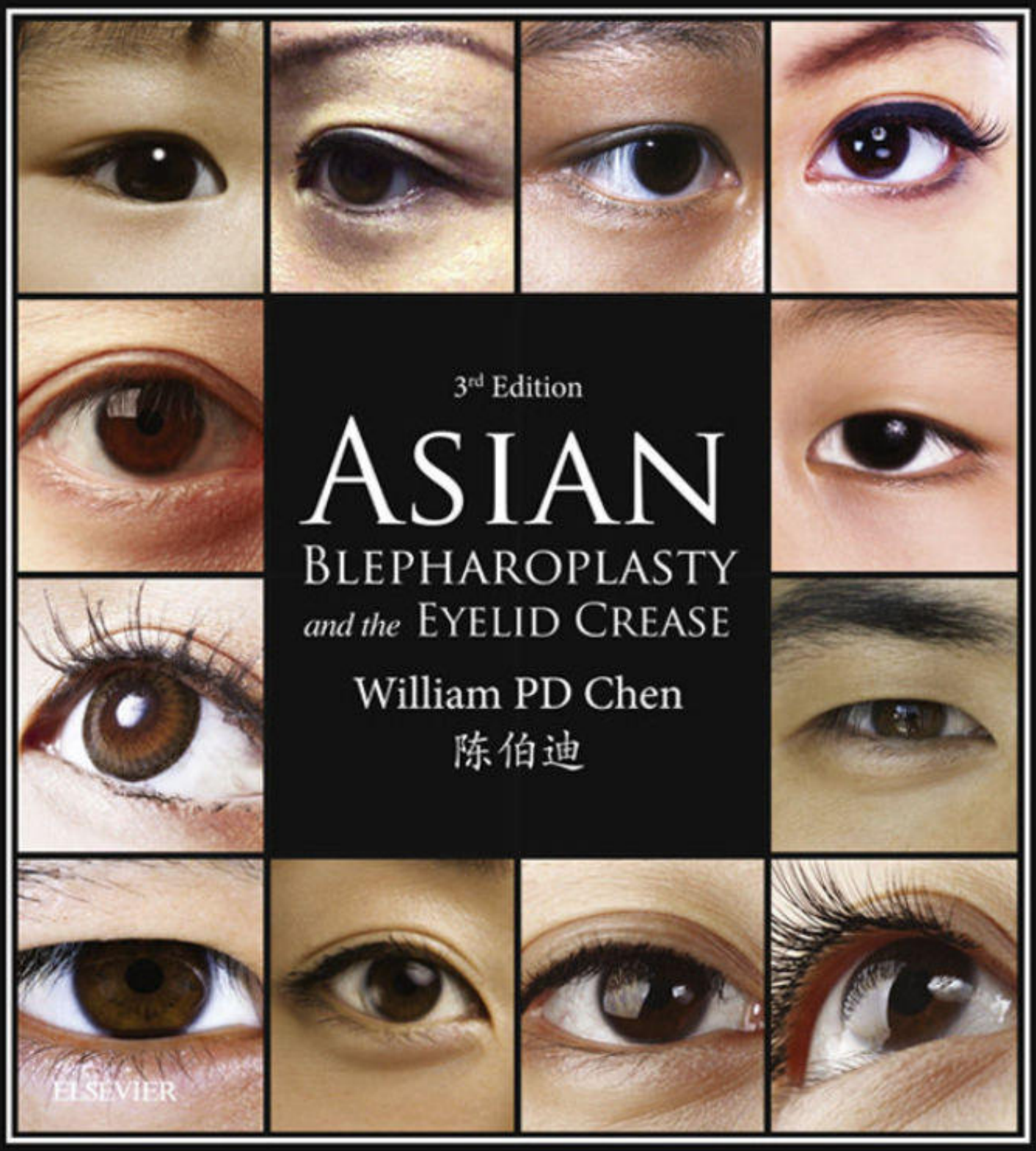

3rd Edition

ASIAN BLEPHAROPLASTY and the EYELID CREASE

William PD Chen
陈伯迪

ELSEVIER

PHẪU THUẬT
TẠO MÍ
NGƯỜI CHÂU Á

"Asian blepharoplasty is a highly specific form of upper blepharoplasty, adapted to each individual's findings and demands the highest level of understanding, a focused mind and manual dexterity to achieve the proper result."

PHẪU THUẬT TẠO MÍ MẮT NGƯỜI CHÂU Á

THIRD EDITION

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To my parents, Fred and Katie,
my family (Lydia, Katherine and Andrew),
and my mentor Dr Clinton (Sonny) McCord

PHỤ LỤC

MỤC LỤC VIDEO

All videos are supplied by Dr WPD Chen

1 Primary Asian blepharoplasty for a 29-year-old female, desired nasally tapered crease, shows treatment of medial canthal fold and up-knotting
2 Primary Asian blepharoplasty for a 26-year-old female, who desired parallel crease. Video shows up-knotting
3 Revisional Asian blepharoplasty on a woman who desired parallel crease shape
4 Revisional Asian blepharoplasty for a 19-year-old female who showed shallowing of crease from residual fat
5 Primary Asian blepharoplasty for a 36-year-old female. Desired nasally-tapered crease shape, and of above-average crease height. Shows down-knotting
6 Primary Asian blepharoplasty combined with ptosis repair for a 65-year-old female
7 Primary Asian blepharoplasty for 62-year-old female with presence of sulcus and multiple wrinkles, without true eyelid crease
8 Repeat Asian blepharoplasty for 41-year-old male, previous Asian blepharoplasty by Chen was 9 years prior. One can identify the compartments well
9 Primary Asian blepharoplasty for a 48-year-old female. Has sulcus preoperatively; desires a nasally-tapered crease shape, with lower-than-average crease height
10 Revisional Asian blepharoplasty in 28-year-old female who presented with crease asymmetry. Desired medium height NTC crease and excised 1 mm scarred skin. Shows down-knotting
11 An introductory case showing the general concepts and steps involved in Primary AB on a right upper eyelid
12 Another case showing the general steps involved in Primary AB on a right upper eyelid
13 Primary case of a 30-year-old female with OD absent crease and OS rudimentary crease desiring a higher than average parallel crease
14 Primary case of a 22-year-old female desiring a parallel crease, having previously used adhesive tape over pretarsal area
15 Primary case of a 22-year-old male with left eye fissure appearing larger. Patient desires a low-set parallel crease
16 Primary case of a 31-year-old male with an absent crease, desiring an average height parallel crease
17 Revisional surgery on a 41-year-old Korean female who had previously undergone upper blepharoplasty
18 Revisional surgery on a 60-year-old female who had previously undergone blepharoplasty and a subsequent revisional attempt whereby abdominal fat had been injected into the upper lids two years previously
19 Primary case of a 31-year-old female with absent crease desiring average height NTC
20 Primary case of a 52-year-old male with no crease and moderate hooding
21 Revisional surgery on a 68-year-old female with permanent eyeliner. This patient had deepened sulcus from blepharoplasty and a scarred crease at 8 mm
22 Revisional surgery on a 43-year-old female presenting for RUL revision
23 Revisional surgery on a 43-year-old female presenting for LUL revision
24 Revisional surgery on a 35-year-old male presenting for NTC
25 Primary case of a 28-year-old female with fatty, heavy lids
26 Primary case of a 31-year-old male with an absent crease and a truncated upper lid hooding, desiring a parallel crease of average height
27 Primary case of a 37-year-old female with a shielded NTC crease OU with more hooding of the left eye, desiring greater than average NTC
28 Revisional surgery on a 38-year-old female who had previously undergone revision, desiring the crease to be reset again
29 Revisional surgery on a 46-year-old female who had previously undergone three separate crease procedures
30 Primary case of a 26-year-old male with an absent crease, desiring a parallel crease
31 Demonstration of effect of high crease placement on levator muscle function
32 Paper model demonstration of effect of higher-than-normal attachment on sheets of paper relative to each other
33 Demonstration of orbital pulley fixation of medial rectus muscle with recession in strabismus repair for congenital esotropia in a 3 year-old boy

PREFACE

This new edition of my book on the topic of Asian eyelid surgery, specifically on the 'double-eyelid crease' operation, is a complete update and further expands on what I feel to be highly relevant functional topics related to the eyelid crease. Its readership will include house officers/residents in training, practitioners and seasoned surgeons in the fields of plastic surgery, ophthalmology (including oculoplastic surgery), facial plastic/head and neck surgeons (ears, nose and throat), cosmetic surgeons and dermatologists interested in learning about aesthetic surgery of the Asian eyelid. (I have also had some patients who have read the book prior to seeing me.) In essence, it is a manual for learning upper blepharoplasty at a highest level of precision.

There are two main schools of techniques, the external incision methods and the buried sutures methods. (I prefer to avoid using the misleading terms of 'non-incisional' or 'no-cut' method for the buried sutures method. These are terms often used indiscriminately in Asia, with patients often unaware of the use of permanent, non-dissolvable buried sutures.) Overall the data are unclear about the incidence for each main category, but it is probably in the range of 70–90% of cases worldwide using external incisional methods. (My own discussion with Dr Khoo Boo-Chai from Singapore 10 years ago was that in his busy practice he would select only about 5% of his patients as appropriate candidates for the buried sutures technique.) This figure is highly variable region to region, as there are physicians who do either one or the other method exclusively. Based on statistics published by the American Society for Aesthetic Plastic Surgery, there has been a doubling of *surgical* cosmetic procedures over the last 15 years in the United States. (If one adds *nonsurgical* cosmetic procedures, defined as Botox, fillers, chemical peels and micro-dermabrasion, the increase over the 15 years is almost seven-fold.) It is reasonable to expect this similar explosion in procedures in Asia, perhaps even more in China and Korea. Even though there have been more than a dozen papers on variations of buried suture methods published in the last five years (in first- and second-level journals), I am unsure whether this translates into an increase in cases using the small incision buried sutures methods.

As compared to the original text, *Asian Blepharoplasty: A Surgical Atlas* (1995), which described the basic techniques and concepts, and the second edition, *Asian Blepharoplasty and the Eyelid Crease* (2006), which provided an introduction to the lid crease's functional dynamics, this new edition includes a detailed analysis of the biodynamics of the lid crease as well as its functional vulnerability. Therefore in a sense the book has come full circle, and could be titled just as well as *The Eyelid Crease and Application in Asian Blepharoplasty*. The content here is a meticulous discussion of the eyelid crease: it is the portal to the upper lid whenever a physician plans upper eyelid surgery, whether functional or aesthetic. For an eyelid surgeon, learning how to enter and exit the upper lid with functional integrity and ideal wound healing, while controlling the appearance of the lid crease, is an essential skill.

The book's 26 chapters offer an extensive treatment of the arrays of techniques available up to present. Seven new chapters are included on more advanced understanding. The advanced concepts start with Chapter 17 on the concept of the preaponeurotic space and fat as a 'glide zone', followed by Chapter 18 on the beveled approach in revisional Asian blepharoplasty. (These two chapters have been carried over from the second edition and are an essential bridge to advanced understanding.) A greater emphasis is now placed on correlating the sensitivity and vulnerability of the lid crease formation to various aspects of techniques and suture placement. The new advanced chapters include observation and measurement of crease height based on head position (Chapter 19), the effect of tarsal tilt in various clinical conditions (Chapter 20), the impeding effect of misplacement of buried sutures and high anchoring (the Faden effect) (Chapter 21), an advanced summary of eyelid crease factors (Chapter 22), and a new concept chapter on the eyelid crease as a stringed series of unipoints (Chapter 23). In addition, I have added Chapter 25 on my own techniques that may be used to reduce the medial upper lid fold during Asian blepharoplasty without the need for more exaggerated epicanthoplasty cuts – a trend that seems to have reached a frenzy for the moment in Korea and China. The concluding Chapter 26 covers a novel hybrid technique for those surgeons favoring a less-than-full skin incision, combining a partial incision with use of a single buried suture medially. There has been a proliferation of published papers in the last 10 years, especially from Asia, the birthplace for this procedure, and I have made great efforts to be inclusive of these references. However, I apologize if the need for conciseness and clarity have prevented me from being all-inclusive, and at times for taking a subjective, judgmental viewpoint.

The illustration content in this new edition has doubled, in both photos and drawings, and the use in this edition of colored three-dimensional cross-sectional drawings facilitates a quick grasp of the concepts. Detailed intraoperative findings are included in many of the clinical cases from the author's personal notebook. The accompanying surgical videos are accessible through

ExpertConsult and have been expanded to 30 surgical cases. The added videos were recorded using current generation equipment and provide greater detail.

The current project involved the use of high resolution cameras from Canon, Nikon, Panasonic Lumix with Leica lens and even an iPhone camera. I use a MacBook Pro and a Mac Mini computer with a 27" Thunderbolt display to collate most of the work. For some photographs, only cropping and brightness adjustments were used. All of the drawings from the previous edition have been redrawn and colorized; all of the added drawings are paired with detailed captions.

Favorite features such as 'Pearls' and 'Pitfalls' have been carried over from the previous edition, as well as convenient comprehensive spreadsheet listings of relevant literature in the Appendices, which has been brought fully up to date. There is an additional new Appendix listing recent papers on epicanthoplasty.

I have been involved in resident-teaching for over 30 years and with teaching the concepts of Asian blepharoplasty through the American Academy of Ophthalmology for 25 years, during which time I have published seven textbooks. My preference, supported by feedback that I receive from readers, has always been to use a simple writing style that focuses on conveying ideas rather than getting entangled in complicated anatomic terms and medical English. This new edition is offered in that same style. The popularity of the second edition was soon followed by an unforeseen global recession, and it is a joy for me now to be able to continue my exploration on this topic.

The book is meant for use by medical professionals in learning the techniques and concepts of Asian blepharoplasty, as well as being a comprehensive treatise on this topic from 1896 to present. It is not meant in any way for use as an illustrative guide for physicians to show to their patients, nor for patients searching for medical guidance or as a substitute for proper medical consultation. The final determinant in surgical outcome always depends on full understanding as well as an open dialogue between physician and patient. One should not draw on these illustrations as examples applicable to any particular individual nor as a basis to arrive at medical decisions.

As before, I wish to thank Dr Kenichiro Kawai of Osaka University Graduate School of Medicine for allowing me to re-use his anatomic drawing and stereoscopic photograph from his upper eyelid vascular arcade research paper, as well as sincerely acknowledging with remembrance the late Dr Khoo Boo-Chai of Singapore, a pioneer in this field, for his generous teaching when I first asked him about his techniques and his views on suture methods versus external incision techniques.

Acknowledgments

I am blessed with a great team from Elsevier in making this edition possible; their assistance along the way was highly significant in keeping me on track. As the subject gets complicated and the demand for detail increases, the precision I require of myself as an author and what I ask of the team members rises significantly. The recipients of this demand included our team leader Rus Gabbedy, Executive Content Strategist of Elsevier (London), Carole McMurray (Content Development Specialist, Edinburgh) and John Leonard (London), who assisted with manuscript development; and the art team, who included Karen Giacomucci (Elsevier, Philadelphia) and her art team members Paul Kim (New Jersey), Vicky Heim (Atlanta, Georgia) and Jade Myers. The video effort and online resource development at Inkling is led by Jonathan Davis, Multimedia Producer of UK/EMEA–Elsevier Ltd (based in Oxford). Julie Taylor (Publishing Project Manager, Oxford) and Elaine Leek (copy editor) helped organize the text and illustrations and correct all our mistakes. To them, I wish to offer my greatest accolades for a job well done, working with me through different time zones and work schedules, via emails and phone calls. I really appreciate their guidance.

I could not have completed the project without the support of my family, Lydia, Andrew and Katherine, as well the foundation of knowledge imparted to me during my formative training under my mentor, Dr Sonny McCord in Atlanta, Georgia. I am grateful.

CHƯƠNG 1

NẾP MÍ MẮT LÀ GÌ ?

Thông thường, nếp mí mắt thường là mô tả một nếp da tự nhiên ở mí mắt trên, thường phân chia nó thành hai phần: phần dưới gần với lông mi, và phần trên là da chạy từ nếp mí đến bờ của lông mày.

Khoảng 50% dân số châu Á là có nếp mí tự nhiên, và phổ biến hơn ở những người không phải người châu Á. Nếp mí người châu Á có gì khác biệt với một mí mắt đôi (với một nếp mí không đều chia thành hai phần, do đó gọi là 'mắt 2 mí') từ một mí duy nhất (gọi là mắt 1 mí).

Phẫu thuật tạo mí đôi (quy trình) là một dạng phẫu thuật để bổ sung hoặc tạo ra một nếp mí mắt cho người muốn có mí đôi. Thường là những người không có nếp mí, hoặc nếp mí không rõ ràng, hay những người có nếp mí không đều hai bên.

Hình dáng nếp mí ở người châu Á rất nhiều dạng. Cách dùng mô tả hình dáng của nếp mí cũng có rất nhiều, phụ thuộc vào từng dân tộc và ngôn ngữ liên quan. Hình 1-1 minh họa các ký tự tiếng Trung cho các từ 'mí đôi'. Hình 1-2: chữ viết tiếng Nhật của chữ Kanji đối với 'mí đơn [một]' và 'mí đôi [hai]'. Các ký tự phổ biến cho tiếng Trung và tiếng Nhật cho phẫu thuật tạo mí được minh họa trong hình 1-3.

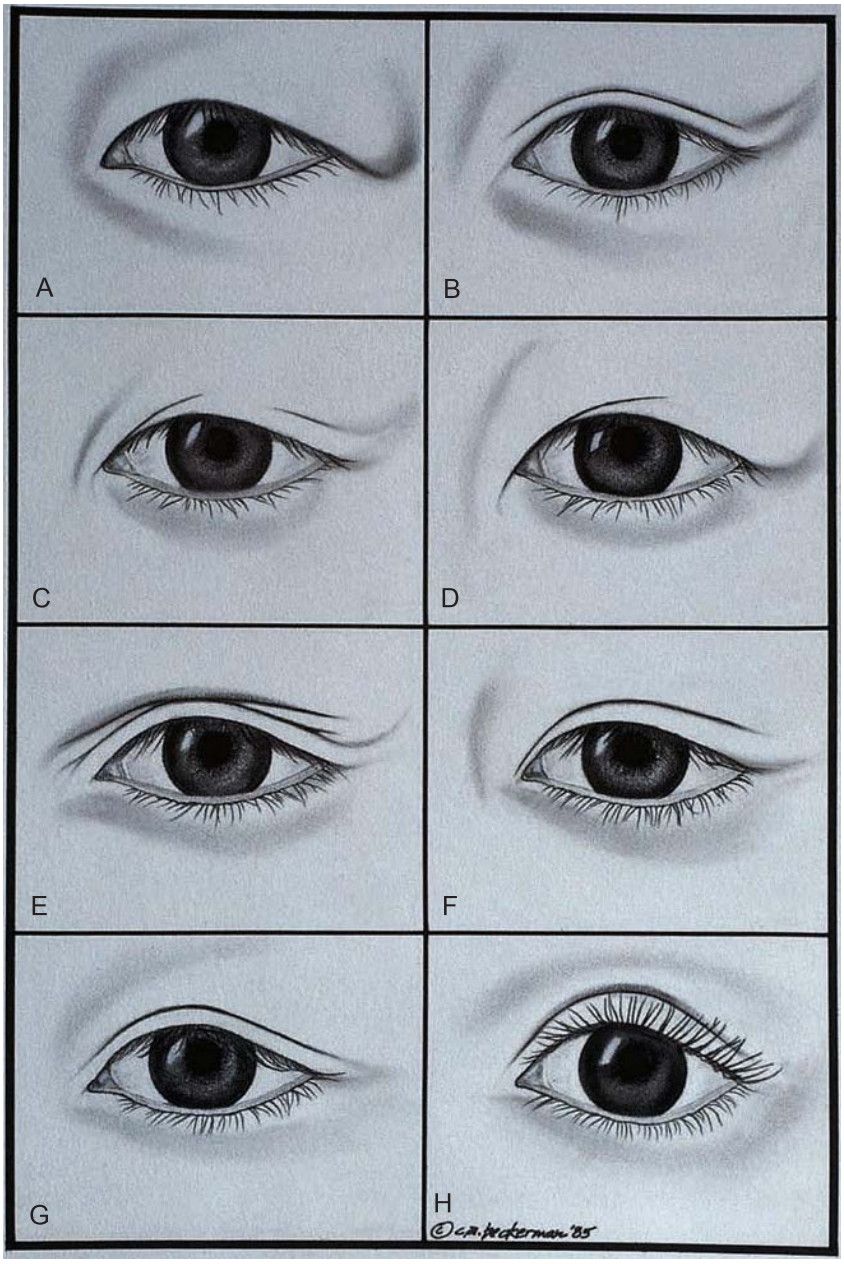
FIGURE 1-2 ■ Ký tự Kanji Nhật Bản cho 'mí đơn' (bên trái) và ' mí đôi' (phải).

Hình 1-3 ■ Các ký tự phổ biến đối với tiếng Trung và tiếng Nhật đối với quy trình tạo nếp mí măt, hoặc ' quy trình tạo mí đôi'

Hình 1-1 ■ Các ký tự viết bằng tiếng Trung cho 'mí đôi' [da] .

Như tác giả đã mô tả trong các lần xuất bản trước đây,[1-9] nếp mí có thể xuất hiện không cân đối nhau, hoặc một bên có nếp mí và bên kia không có nếp mí. Nếp mí có thể liên tục hoặc được đứt đoạn (không liên tục).

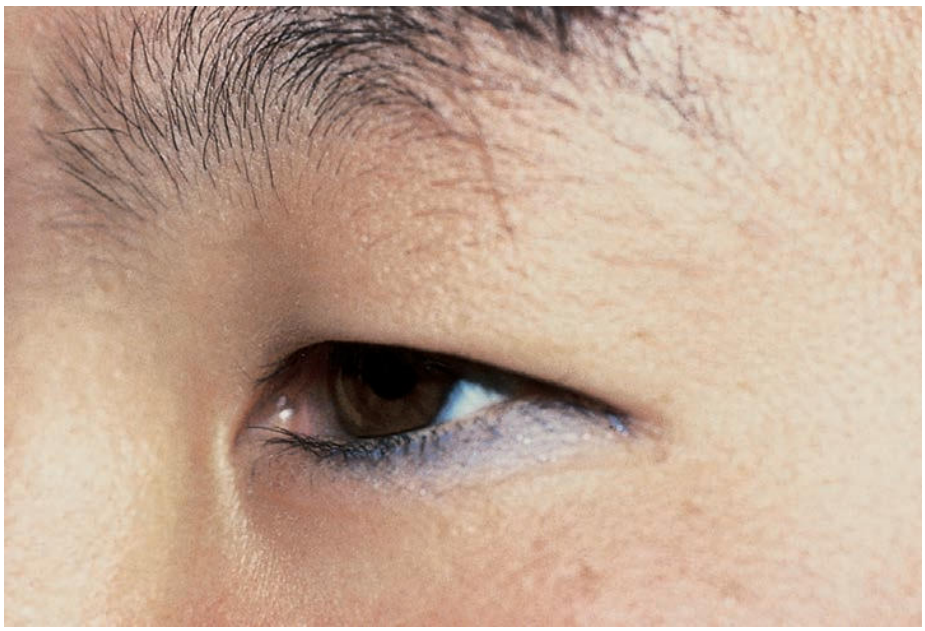
Hình 1-4 cho thấy các hình thái khác nhau của Mí mắt người châu Á.



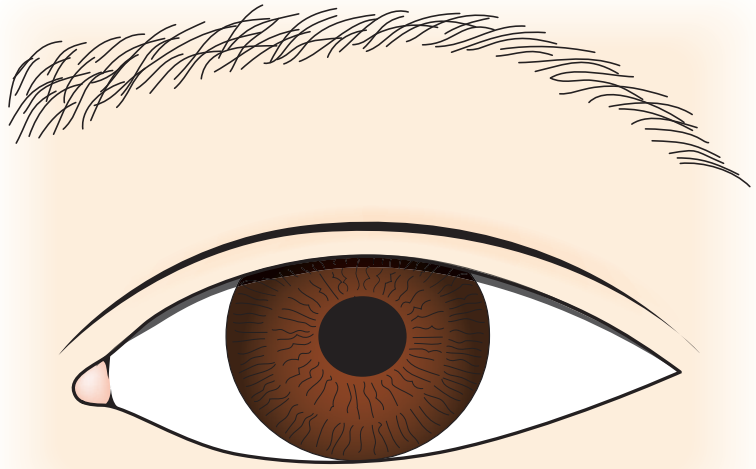
Hình 1-4 ■ Trước đây Chen[1] đã mô tả các hình thức khác nhau của nếp mí người châu Á, như minh họa. (A) Mắt một mí không nếp mí. (B) Nếp mí dài ngang bằng với bờ mi trên. (C) Nếp mí phân đoạn hoặc không liên tục. (D) Nếp mí một phần hoặc không hoàn chỉnh. (E) Nhiều nếp mí. (F) Mí mắt người châu Á với nếp mí giảm dần ở mũi; trong một tỷ lệ nhỏ các trường hợp nó cho thấy rõ hơn khi nếp mí chạy ra ngoài. (G) Mí mắt châu Á với một nếp mi song song với bờ mi. (H) Nếp mí hình bán nguyệt đặc trưng của người châu Âu

Hình 1-5: Mắt một mí không có nếp mí. Có thừa một ít da mí trên, là nguyên nhân thứ phát làm cho lông mi xoay vào trong

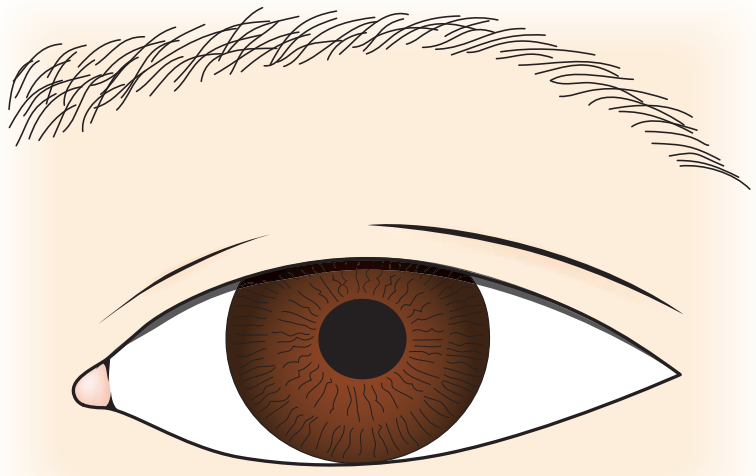
Hình 1-6. Mô tả mí trên với một nếp mí rõ ràng. Đây là nếp song song với bờ mi. Hình 1-7. Mô tả mí trên với một nếp mí bị mất một phần



Hình 1-5 ■ Mí mắt người Châu Á không có nếp mí. Bệnh nhân này có da thừa tương đối, là nguyên nhân thứ phát làm cho lông mi xoay vào trong. Lưu ý phần thừa da mí trên (nếp mí) rõ ràng che phủ 1 phần phía ngoài của nhãn cầu. Vị trí tốt để tạo nếp mí sẽ làm cho mắt trông lớn hơn

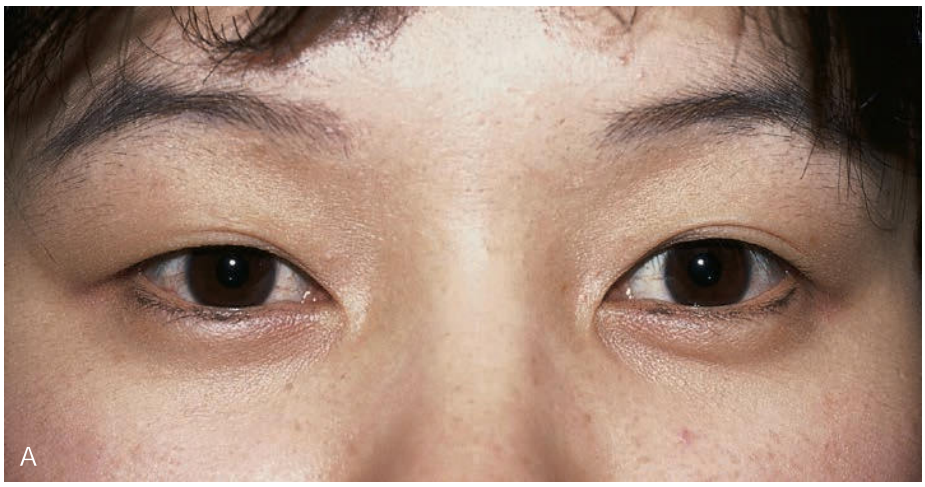


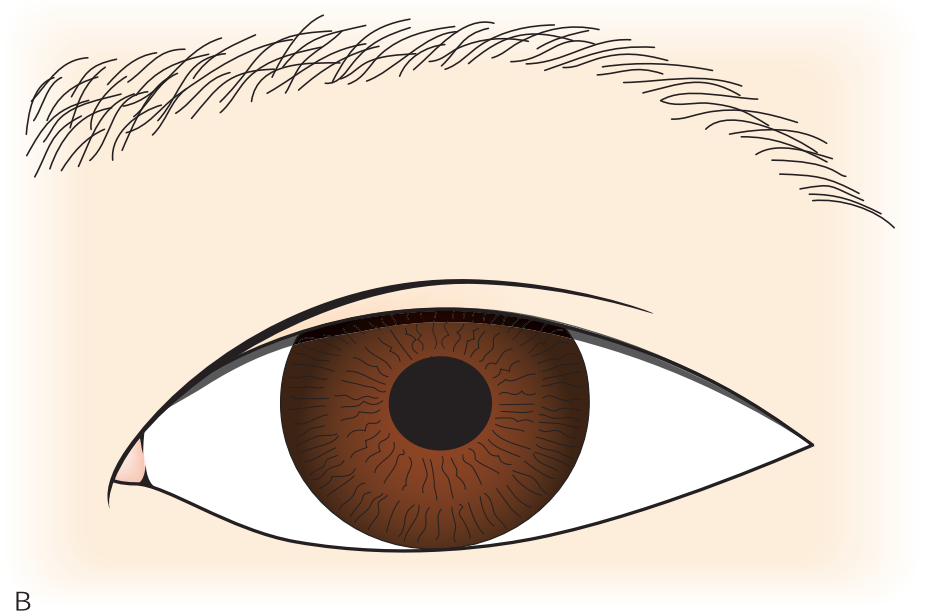
Hình 1-6 ■ Mí mắt người châu Á có nếp mí song song.



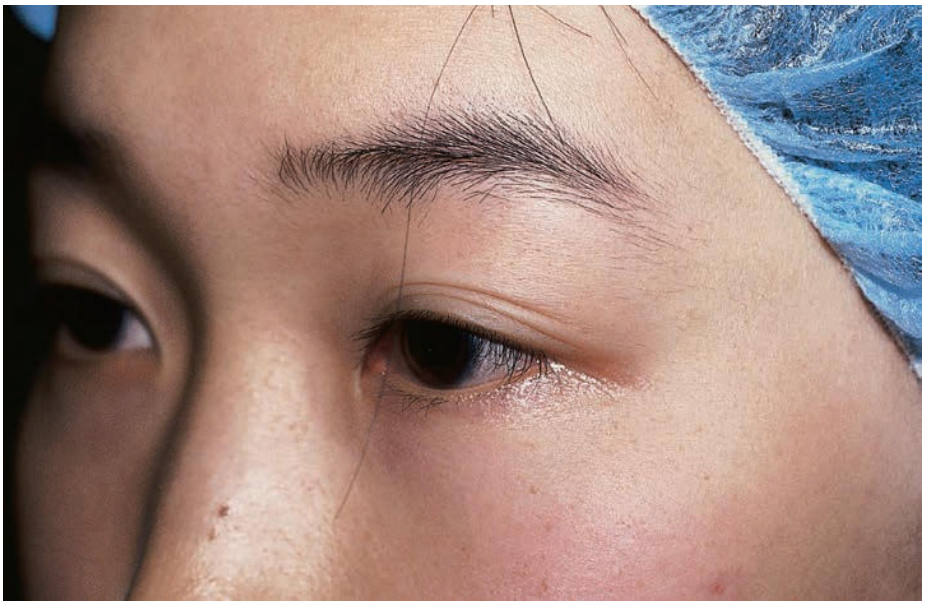
Hình 1-7 ■Nếp mí có 1 phần bị mất đi.

Hình 1-8: Mắt một nếp mí không hoàn chỉnh hoặc một phần. Hình 1-9: Nếp mí bắt đầu từ nếp quạt góc trong và kéo dài lên trên ra ngoài đến nửa chừng mí mắt. Có hai nếp mí rất rõ ràng chạy song song với nhau





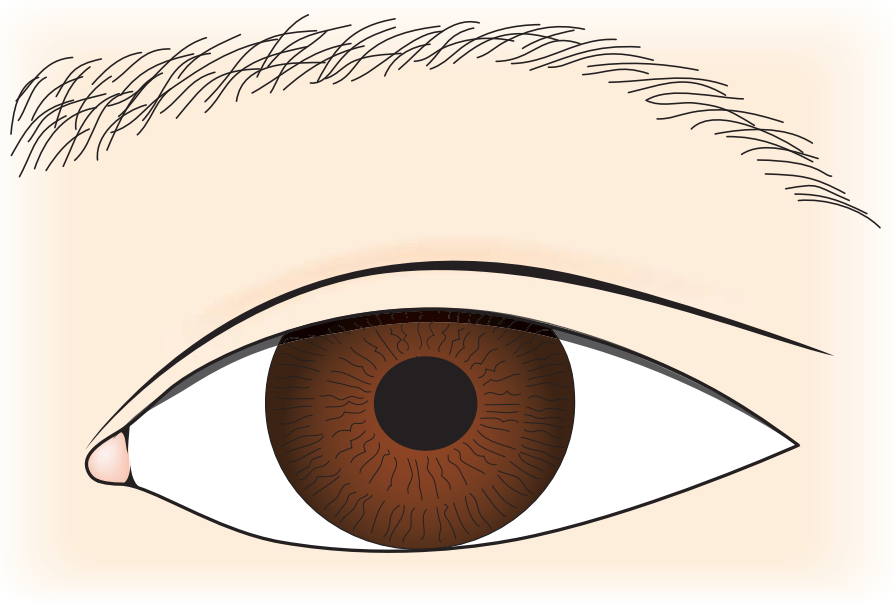
Hình 1-8■ (A, B) Nếp mí không hoàn chỉnh hoặc một phần.



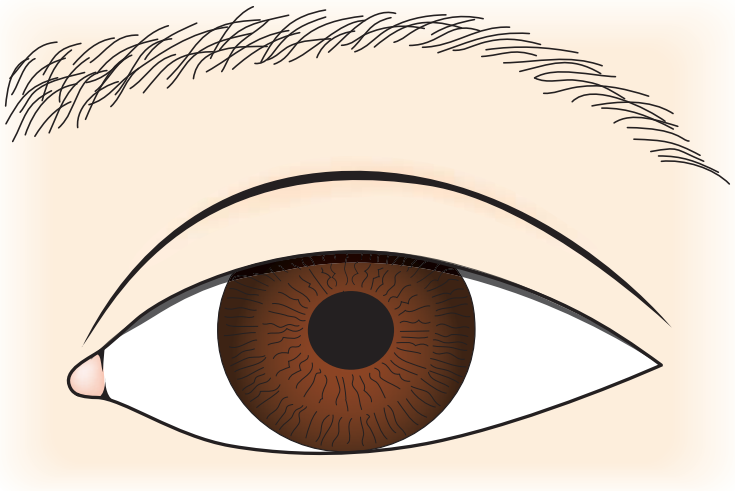
Hình 1-9 ■ Người châu Á với hai nếp mí rất rõ chạy song song với nhau nhưng nhập chung lại khi đến gần vùng mũi

Hình 1-10: Nếp mí giảm dần ở mũi. Đến 1/3 giữa và 1/3 ngoài thì nếp mí chạy xa dần bờ mi trên

Hình 1-11: Nếp mí người châu Âu, trong đó ở 1/3 giữa thì nếp mí xa bờ mi nhất



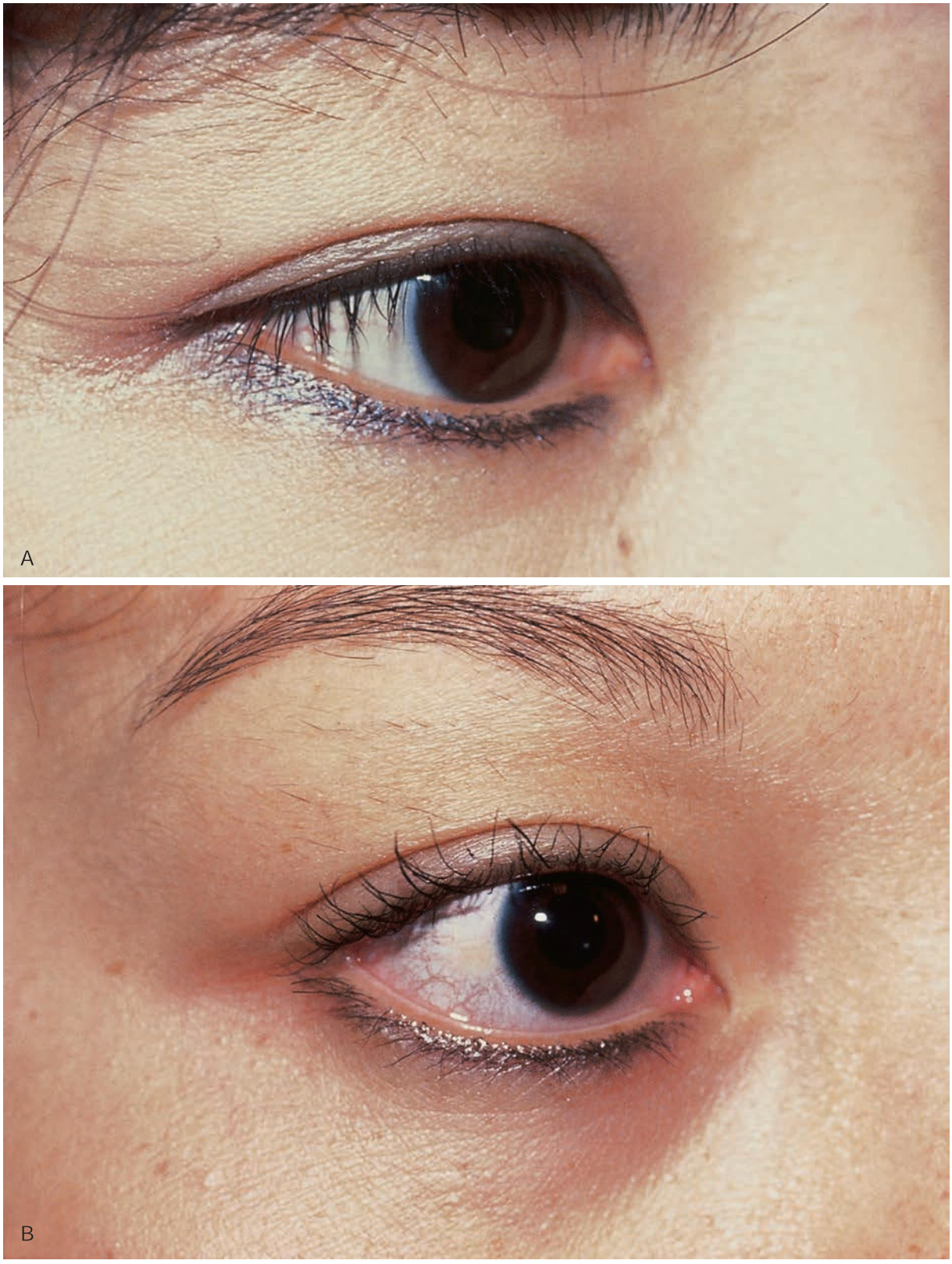
HÌNH 1-10 ■ Nếp mí càng xa bờ mi khi chạy từ trong ra ngoài



Hình 1-11 ■ Nếp mí người châu Âu có hình bán nguyệt. Lưu ý: ở giữa nếp mí là xa bờ mi nhất

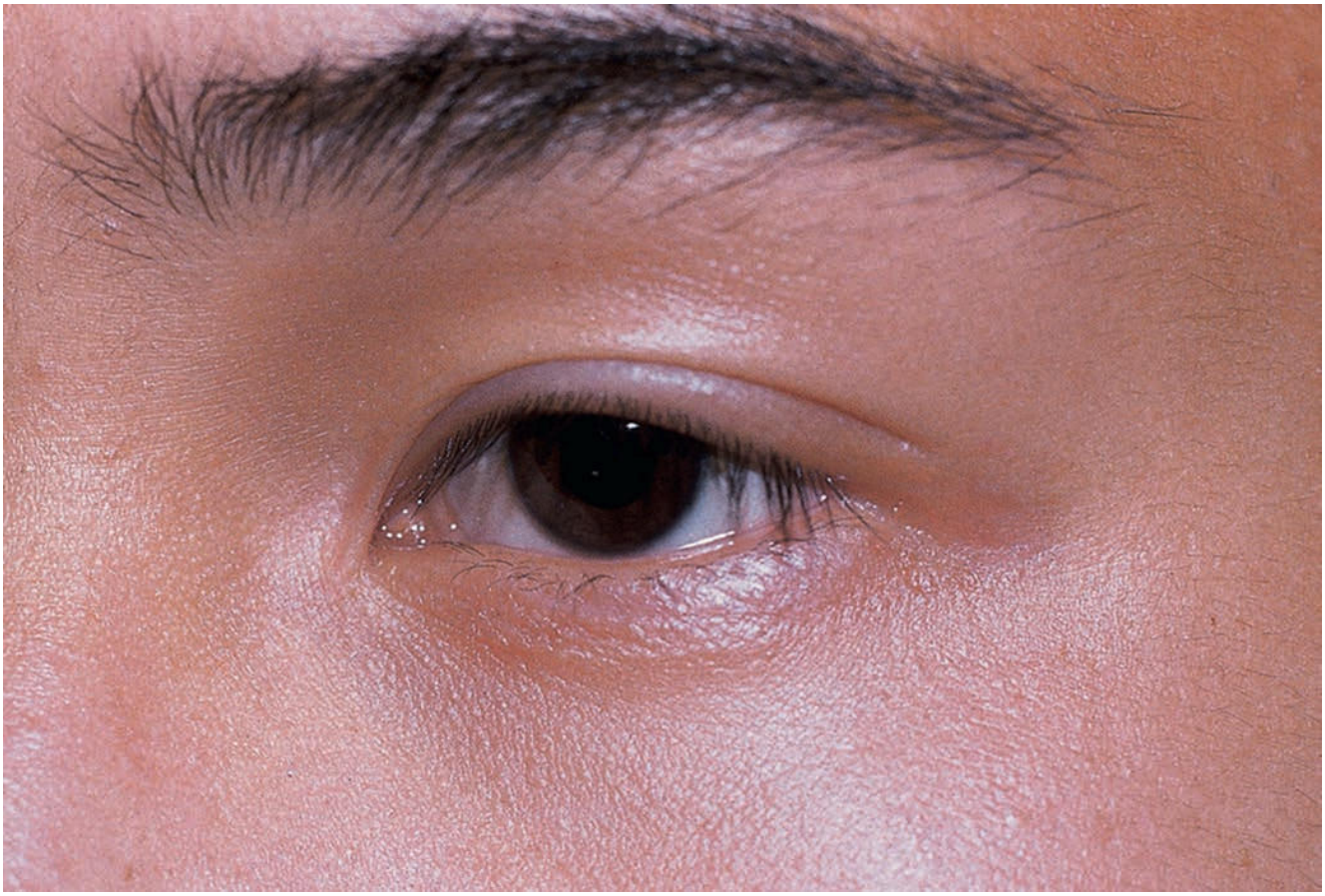
Hình 1-12A: Người châu Á có nếp mí liên tục, giảm dần ở mũi (NTC) (một thuật ngữ ít có khả năng hơn là nếp mí "bên trong"), trong đó nếp da phủ qua góc mắt trong, đến gần lông mi hơn, tới đỉnh của góc mắt trong.

Hình 1-12B: Có thể là một nếp mí song song (PC) (một thuật ngữ ít hấp dẫn hơn là nếp mí 'Bên ngoài'), trong đó nếp mí chạy khá song song với bờ mi từ góc mắt trong đến góc mắt ngoài.

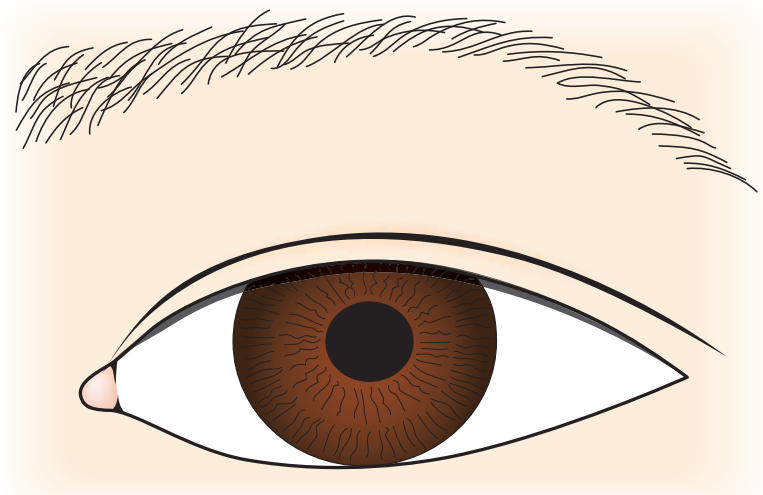


Hình 1-12 ■ (A) Mí mắt người châu Á với nếp mí giảm dần ở mũi. Lưu ý: nếp mí bắt đầu từ góc mắt trong chạy lên ra ngoài đến 1/3 giữa thì nếp mí chạy song song bờ mi. (B) Mí mắt châu Á với một nếp mí song song

Hình 1-13:Nếp mí giảm dần ở mũi, càng chạy ra ngoài thì càng xa bờ mi hơn, gọi là nếp mí mở rộng phía ngoài (LTC). Hình 1-14: là hình dạng khác là nếp mí giảm dần ở mũi, có thể bắt đầu từ bờ mi trong tới 1/3 giữa ngoài của mí mắt.

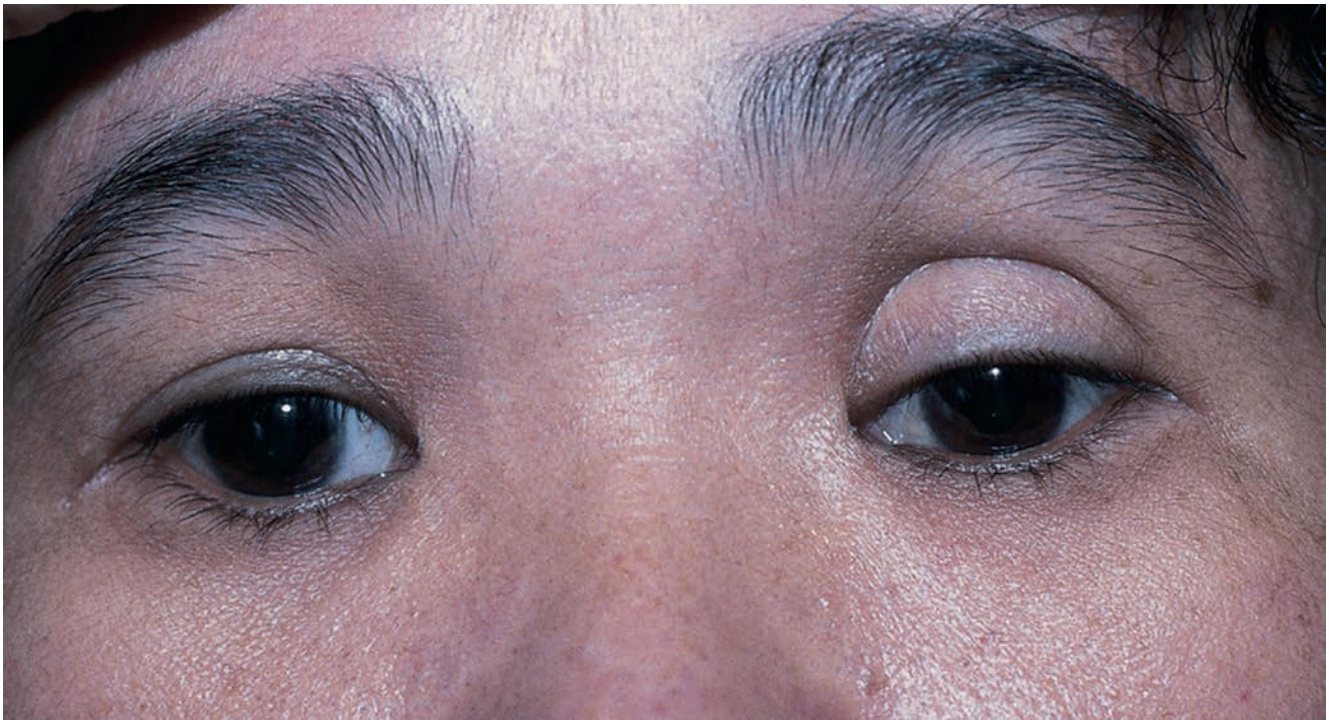


HÌNH 1-13 ■ Nếp mí giảm dần ở mũi có rất nhiều dạng, từ trong chạy cao lên khi ra ngoài, chỗ rộng nhất của nếp mí và bờ mi là ở phía ngoài của mí mắtt như trong Hình 1-10.



Hình 1-14 ■Nếp mí giảm dần ở mũi bắt đầu từ bờ mi trong chạy đến giữa và ra ngoài mí mắt (xem Hình 1-12A)

Người Châu Á hiếm khi có nếp mí hình bán nguyệt, như thường thấy ở người Châu Âu (xem Hình 1-4H). Trong nếp mí hình bán nguyệt thì 2 đầu trong và ngoài gần bờ mi hơn ở giữa. Người châu Á mà có nếp mí bán nguyệt thì họ hay than phiền là đã phẫu thuật tạo mí đôi ở Mỹ (Hình 1-15). Nếp mí này thường không tự nhiên, cao và thô (gọi là hội chứng 'uhh').



Hình 1-15 ■ Người châu Á sau phẫu thuật tạo mí đôi. Lưu ý: nếp mí hình bán nguyệt cao bất đối xứng