

## An Analysis of Asian Eye Among Manipuri Population And its Surgical Management

Dr. Akoijam Ibohal Singh,<sup>1</sup> Dr. Pebam Manisana Singh,<sup>2</sup> Dr. Suiyibangbe,<sup>3</sup> Dr. Nepram sanjib Singh.<sup>4</sup>

<sup>1</sup>(Assistant Professor. Plastic Surgery Department. Regional Institute Of Medical Sciences, Imphal, Manipur, India.)

<sup>2</sup>(Grade-III Officer, Manipur State Health Services.)

<sup>3</sup>(Mch Ist Year Plastic Surgery, Regional Institute Of Medical Sciences, Imphal, Manipur, India.)

<sup>4</sup>(Professor And Head, Department Of Plastic Surgery, Regional Institute Of Medical Sciences, Imphal, Manipur, India.)

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### Abstract:

**Background:** The double fold operation is the most widely performed among cosmetic surgery procedures in Asia. Between 40% and 60% of Asians do not have double eye lip folds: thus upper eye lip skin sagging, pseudoptosis that obstructs the visual field, and / or western influences all likely contribute to the high frequency of upper eye lip surgery among Asians.

**Materials and method:** a 2year hospital based descriptive, cross-sectional study was conducted at Regional Institute of Medical Sciences, Imphal to analyse the clinical profile of cases having Asian eye lip and outline the surgical management. Patients within the 16-35 years age group, having genuine complaints and understanding the implication of the operation were included in the study, thirty patients with Asians eye lip of varying degrees attending plastic surgery OPD were subjected to detailed history taking, examination and investigation. All of them underwent blepharoplasty operation with the external incision technique.

**Results:** All procedures were uneven full Aesthetic appearance of most of the patients was satisfactory and acceptable, five patients complained of asymmetry between the two eye prolonged eye lip oedema was observed in four cases.

**Conclusion:** the anatomic differences in the upper eye lip anatomic between Asians and westerners include absence or presents of lip crease volume of adipose tissue, presence of epicanthal fold etc. Asians eyelid blepharoplasty creates a youthful and attractive easily, so surgery should be undertaken with a care.

**Keywords:** Asian eyelids, Tarsal plate, Orbital septum, Blepharoplasty.

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### I. Introduction

Asians have traditionally lived in accordance with a confucian morality, especially in China Japan and Korea and thus they have tended to avoid cosmetic surgery. Surgery of the face or body brings disgrace to the good name of ones father. Because of the more recent influence of western culture, however, cosmetic surgery has become increasingly universalized and is now frequently performed in Asia.

One of the distinguishing features between the individual of Asian descent and someone of western descent is the absence or presence of an upper eyelid crease. In Asian population an upper eyelid crease is called a single eyelid and an eyelid with a crease a double eyelid. At least 50% of east Asian demonstrate a single eyelid, so termed because in the absence of a superior palpebral fold, the upper lid drapes like a single, unruffled curtain from the supraorbital ridge to the eyelashes. Surgical creation of a palpebral furrow divides the single eyelid into two well defined segments (pretarsal and preseptal) thus producing the "double eyelid".<sup>1</sup>

The characteristic features of an Asian eye are (1) A single eyelid or lack of supratarsal crease, (2) Amount and location of periorbital fat, and (3) Presence of a well defined epicanthal fold.<sup>2</sup>

An eye with a single eyelid has a profound influence on a person's appearance. Some east Asians has a very "slender slit" eyelid configuration which severely restricts eye exposure creating an illusion of limited social accessibility, or total inaccessibility. On the other hand, an eye with a double eyelid looks fresh, youthful and attractive.

Double eyelid folds are formed from the levator palpebrae superioris muscle, which originates superior to the orbit and is attached to the anterior surface of the tarsal plate. Thin fibres penetrates the orbicularis oculi muscle to exit from and adhere to the dermis anterior to the tarsal plate, so the the overlying skin region is depressed when the levator palpebrae muscles contracts.<sup>3</sup> Asian lack the thin fibres that extend from the levator palprae muscle to the skin and thus generally do not have double eyelid folds.

Because some people do not have double eyelid folds when they are born but acquire double folds with age<sup>4</sup> and in some people double folds are not present in the morning but appear in the afternoon, the preceding anatomic explanation that describes a congenited arrangement of upper levator palpebrae muscle fibers extending to the dermis to form double fold is not sufficient<sup>5</sup>, double eyelid folds are also determined by the thickness and volume of various anatomic compounds of the eyelids, in particular orbital fat, connective tissue, subcutaneous fat, and pretarsal fats, some researchers attribute the lack of double eyelid folds in Asians not only to eyelid fat but also to the thickness of the orbicularis oculi muscle and skin<sup>6</sup>, from an anatomic or morphologic and dynamic new point, the reason for single eyelids is a flat, non-forward protruding forehead and abundant subcutaneous fat under the upper eyelids. This is in contrast to the facial anatomy of Westerners, which is characterised by protruding bony structure surrounding the eyes, such as the supraorbital arch and zygomatic bone and relatively small amount of fat between these bones and the somewhat deeply set eyeballs, resulting in retraction eyelid folds.

## **II. Materials And Methods**

This cross sectional study was conducted in the department of plastic and reconstructive surgery, RMS during November 2013 to October 2015. Thirty cases within the 16-35 years age group who had genuine complaints, and were well motivated were included in the study. Cases below 16 years and above 35 years of age, those having unrealistic expectation or having underlying psychiatric illnesses were excluded from participating.

## **III. Procedure**

Using calliper, an eyelid crease of 8-10 mm above the ciliary margin is marked using a skin marker pen on the operation table. Local anaesthetic (2% lignocaine with adrenaline) is injected subcutaneously to provide anaesthesia as well as to facilitate hemostasis. Incision is made using a No.15 surgical blade. In cases with redundant upper eyelid skin, a strip of skin and underlying palpebral orbicularis oculi muscle is excised. The inferior skin and pretarsal orbicularis flap are dissected from the tarsal plate.

To create a supratarsal eyelid crease three to four buried 1-0 polypropylene sutures are placed between the tarsal plate and the dermis of the inferior incision, and approximated with equal tension on both sides. Skin closure is done with a running subcuticular protene 6-0. Eyes ointment is smeared over the suture line, which is then taped.

Postoperatively sterile ice cubes are applied over the operated eyelids to decrease lid oedema and bruising. Subcuticular sutures were pulled out on post operative day 7. Written informed consent was obtained from each case prior to undergoing operation. Confidentiality was strictly maintained as regards patient identity and any personal data. Ethical approval was obtained from the institutional ethics committee, RMS at the beginning of the study.

## **IV. Results**

All the thirty cases were female (chart 1) Age of the cases ranged from 18 years to 35 years, majority being within 21-25 years (table 1). Religion wise, 25 were Hindus and the remaining 5 Christians (table 2). 15 cases hailed from urban areas, 9 from semi-urban and the remaining 6 from rural areas (table 3). Occupation wise, 24 belonged to the student community, 5 cases were engaged in various jobs and only one was a housewife. (Table 4). 27 cases were married and the remainder unmarried (table 5). Preoperatively 7 subjects were already having partial lid creases, when measured, 4 had crease at 4mm above the lash margin, while 3 had crease at 3.5mm (table 6).

Various complications were reported although bruising is quite common, it disappears almost by 7-10 days. Prolonged bruising lasting more than 10 days was observed in 5 subjects, one patient reported minor wound infected. Which subsided with a course of oral antibiotics, Asymmetry of the two newly created eye lid crease was complained by 5 subjects. Moreover 3 patients reported partial loss of crease (table 7)

## **V. Discussion**

The goal of blepharoplasty in Asians is similar to that for other populations, fresh, youthful and attractive eyes, but Asian eyes for Asian patients. Success in doing surgery on patient of East Asian ancestry hinges to a large degree on our sensitivity to their anatomical uniqueness, and to their goals and aspiration. Oriental people have different periorbital anatomic characteristics, their motivation for seeking eyelid treatment are different, and therefore, operative techniques have been modified consequently. There are also many eyelid shapes among Orientals, mostly with regard to the presence and location of the supratarsal fold and/or the presence of an epicanthal fold, the surgeon must therefore master a range of surgical procedure to treat these variations adequately<sup>7</sup>.

American, European and other non-Asians populations commonly assume “Westernization” to be the desire behind Asian blepharoplasty rarely is this the case. gentle movement, however, in the direction of a development universal standard of aesthetics is generally an acceptable option, especially by those whose features are heavy and exaggerated. Aesthetic surgery of the upper eye lip involves both males and females alike in Uchida’s article, he described his results with 1523 eye lip in 396 male and 444 female 8 however in our study all the 30 subjects are females. This may reflect that woman are more beauty conscious. Our study shows that maximum cases fall within the age bracket of 21-25 years, followed by 16-20 years group. Weng GJ also reported that 70 percent of cases requesting upper eye lip blepharoplasties in Asian are below 30 years of age 9 Kay E also depicts a similar picture, reporting maximum patients in the age group of 13-30 years 10. In our study 95% of the subjects are below the age of 30 years.

Religion wise, only Hindus and Christians have enrolled into our study, Hindus comprised of 87% and Christians 13% Hindus being the dominant population in Manipur may account for this, moreover, the Christians population, who reside mainly in the hills, may lack easy accessibility to health care system or may not be aware that surgical correction of Asians eye lip is possible.

According to occupation, majority of the cases were student, social mingling make them more conscious about their body image, hence prompting them to seek blepharoplasty.

In our study 10% of cases are unmarried, this number is less as compared to the married group still desire eye lip surgery to enhance self-esteem and stay more confidently in the sociality.

**Tables:** The anatomic differences between the eyelids of Asians and Westerners are listed below.

Anatomic features	Eyelids of Asians	Eyelids of Westerners
1, Orbital fat, skin orbicularis oculi muscle of eyelid	Relatively thick	Ralatively thin
2, Bone surrounding orbital area	Does not protrude	Protrudes
3, Preseptal fat pad location	Preseptal and pretarsal	Prestarsal
4, Epicanthal fold	Present	Absent
5, Septum levator function point	As low as the pretarsal plane	Above tarsus
6, Tarsal height	6.5 to 8 mm	9.0 to 10.5 mm
7,Medial lid crease origin	Medial canthus	Medial eyelid
8, Presence of crease	50%	100%

**Table 1: Age Group**

Age Group	Number of Cases
16-20	9
21-25	13
26-30	7
31-35	1

**Table 2: Religion wise distribution**

Religion	No. Of cases
Hindu	25
Christian	5

**Table 3: Distribution of residence**

Residence	No. Of cases
Urban	15
Semi- Urban	9
Rural	6

**Table 4: Occupation**

Occupation	No. Of cases
Student	24
Employed	5
Housewife	1

**Table 5: Marital status**

Marital status	No. Of cases
Unmarried	27
Married	3

**Table 6:** Pre-operative measurements in patients with partial crease

Crease Height	No. Of cases
4-5 mm	4
3-4 mm	3

**Table 7:** Complications

Complications	No. Of cases
Echymosis beyond 10 days	5
Wound Infection	1
Asymmetry	5
Partial loss of crease	3

## VI. Conclusion

In many Asians, the single eye lips fold is suitable, but in some people with a single eye lips fold, the eye lips skin sags to the extent that the eye are partially covered when the eyes are open, causing the eyes to appear thinner than what would be typical for the actual eye size, in these cases, double eye lips fold surgery may improve the appearance of the eye lips, causing the eyes to appear larger and brighter.

In the present study, 30 case with Asian eye lips features who had attended plastic surgery OPD in RIMS, Imphal were enrolled. Admission was done one day before the operation when photographs were taken and measurement obtained. Age of the cases ranged between 16 and 35 years, maximum within 21 and 25 years. All underwent blepharoplasty through external incision under local anaesthesia, excision of a composite strip of skin and preseptal orbicularis oculi muscle was performed in all cases. 60 polypropylene sutures were used to hitch the tarsal plate to the dermis of the lower skin margin, average operating time was 1 hour. Ice cold saline compress was used to effect vasoconstriction and lesson oedema. All the cases were discharged home on first post operative day. Sutures were removed on 5<sup>th</sup> post operative day, the results were satisfactory in majority of the cases, follow up was done at 1 month at or 3 month along with photographic documentation.

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