

THE MONGOLIAN FOLD (PLICA MONGOLIA)

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The practising plastic surgeon does, from time to time, come up against the problem of the epicanthus. This is a fold or web of skin lying in the region of the inner canthus and partially obscuring the caruncle. Von Ammon in 1860 made a study of the subject and classified the epicanthus into 4 groups namely:— Epicanthus supraciliaris, Epicanthus palpebralis, Epicanthus tarsalis and Epicanthus inversus. He also documented a method of surgical correction. It is interesting to note that the earlier writers advocated resection of the fold and it was Vilray Blair (1932) who realised that the crux of the problem lies in the rearrangement of the tissues and not the resection of the defect itself. This is a big leap forward in the surgery of the epicanthus.

In our country, one cannot help walking down a street without being passed by some one with a Mongolian Fold (Plica Mongolia). This is a semilunar web of skin which stretches from the upper eyelid downwards and medially and covers a portion of the caruncle (Figs. 1, 2 and 4a). It is bilateral, and in some cases, one side is more prominent than the other (Figs. 2 and 3a). This form of epicanthus is a normal racial characteristic of Mongoloids. Because of its minute size and location, these folds are usually missed unless specially looked for. A useful diagnostic aid is to put the skin of the bridge of the nose on a stretch and this will accentuate the fold (Fig. 4b). The fold can also be lifted up with a cotton wool applicator (Fig. 4c). Strangely enough, few cases do complain of the fold per se. These are usually spotted during an examination of the eyes prior to performing a plastic construction of the superior palpebral fold (the Double Eyelid operation). When the fold is unusually prominent, then an operation is advised because a prominent Mongolian Fold (Plica Mongolia) mars the aesthetic results of a good Double Eyelid operation (Khoo Boo-Chai 1960). The writer prefers to correct the fold first and then wait for a period of time before attempting the second, and to the patient, the more important operation.

In the writer's practice, cases with the fold sweeping upwards and medially from the lower

eyelid are also seen but these are uncommon. The epicanthic fold may be present as a temporary feature in European children; but as the dorsum of the nose becomes prominent, it disappears spontaneously. Those cases seen in Malaya and in Japan are adults. Uchida states that the incidence of the Mongolian Fold is 69% in Japanese adults. The incidence amongst Malayan Chinese is 50% and that is taking into consideration minor degrees of folds some of which do not require operative correction at all. The fold is commonly associated with the typical Mongoloid type of upper eyelid (Fig. 6):— Eyelids which have an excess of fat; no superior palpebral fold; a somewhat straight eyelid margin; narrow, longish and sometimes laterally tilted palpebral fissures, and finally, eyelashes which point downwards with the eye in forward gaze (Fig. 2). These folds cause no functional disability but are a source of worry to some women.

The Mongolian Fold is highly amenable to surgical correction. Uchida (1958) does a simple excision and closes up the raw area with fine interrupted stitches. Millard (1955) mentions in passing that he simultaneously corrects the Mongolian Fold with a "Z" plasty when he does a plastic construction of the superior palpebral fold. Apart from these, the writer is not aware of the correction of this particular cosmetic defect being given sufficient attention. He would like to record in some detail his experiences on this subject.

The principle of the "Z" plasty is applied in removing this web of the inner canthus. If the fold is very big, then a multiple "Z" is used, (Figs. 5c and 5d) otherwise a single "Z" is good enough. A local anaesthetic with a vasoconstrictive agent is used and if the patient is unduly apprehensive, a tranquiliser is given one hour before the operation. The skin, after cleansing with colourless Merthiolate solution, is gently put on the stretch. This accentuates the fold and the stem of the "Z" is drawn with 2% gentian violet just medial to the free border (Figs. 7a and 7b). The upper arm of the "Z" meets the stem at a 60° angle and is a little longer than the lower arm. This is done on purpose because the lower flap will be pulled taut thus exposing the caruncle completely. The upper flap usually needs



Fig. 1a. Mongolian Fold, bilateral and of equal size taken before operation.



Fig. 3a. Mongolian Fold—Right one more prominent than the left. Note how the prominent right fold partially covers the caruncle.



Fig. 1b. Photograph taken 3 months after operation. Note some hypertrophic scarring of both inner canthi. Patient also had a plastic construction of the superior palpebral fold.



Fig. 3b. Same patient 1½ months after operation of her right fold. She also had a plastic construction of her superior palpebral fold. Note associated hypertrophic scarring.

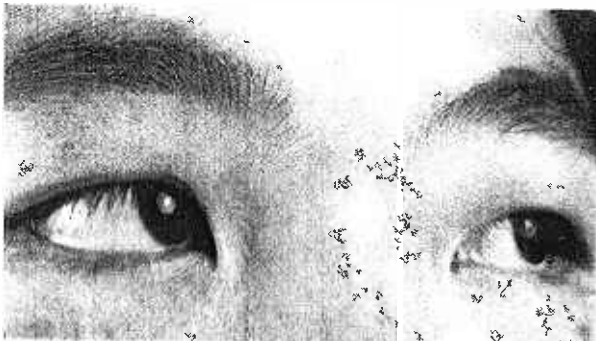


Fig. 2. Mongolian Fold—Right one more prominent than the left. Note the eyelashes pointing downwards with the patient in the forward gaze. This is one of the features of the Mongoloid type of upper eyelid.



Fig. 3c. Spontaneous regression of hypertrophic scar 6 months after operation.



Fig. 1a. Mongolian Fold—bilateral. Note how the fold partially covers the caruncle.



Fig. 5a.



Fig. 1b.



Fig. 5b.

Figs. 5a & 5b. Mongolian Fold—Right side accentuated because of a scar of lower eyelid sustained in early childhood. Note superior palpebral fold present on right side only.

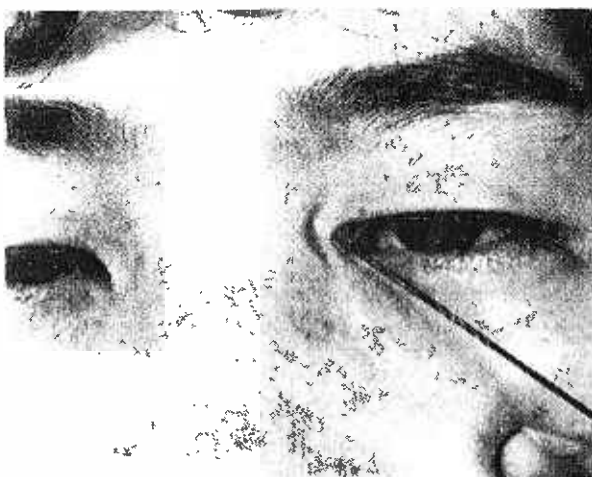


Fig. 1c.

Figs. 1b & 1c. Manoeuvres used for bringing out the fold—two very useful diagnostic aids.



Fig. 5c. Multiple "Z" plasty in interrupted series used for its correction. Scar also excised during the operation.



Fig. 5d. Multiple "Z" plasty in interrupted series used for its correction. Scar also excised during the operation.



Fig. 7a.



Fig. 5e. Photograph taken immediately after operation. Note right caruncle fully exposed and no ectropion. Left Mongolian Fold left alone, instead a superior palpebral fold was constructed for the left upper eyelid to balance up with the one on the right.

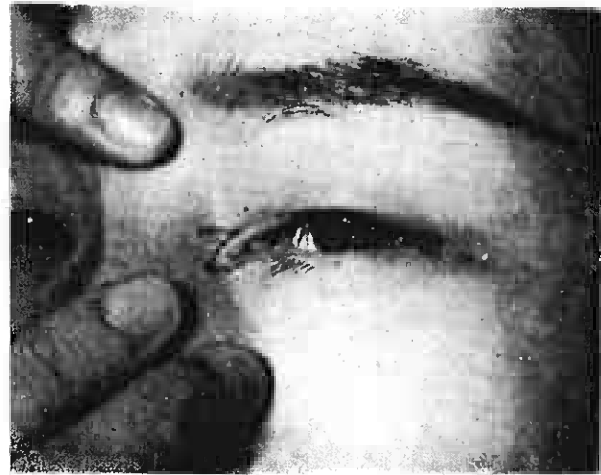


Fig. 7b.

Figs. 7a & 7b. Incision used for correction of the Mongolian Fold. Note the stem of the "Z" is placed just medial to the free border of the fold.



Fig. 6. A case with Mongolian Folds and typical Mongoloid type of upper eyelid. Note rather straight eyelid margin; presence of excess fat; narrow, longish palpebral fissures. The palpebral fissures are laterally tilted. There is also an absence of the superior palpebral fold.



Fig. 7c. The two flaps dissected free. The edges of the wound are undermined fairly extensively.

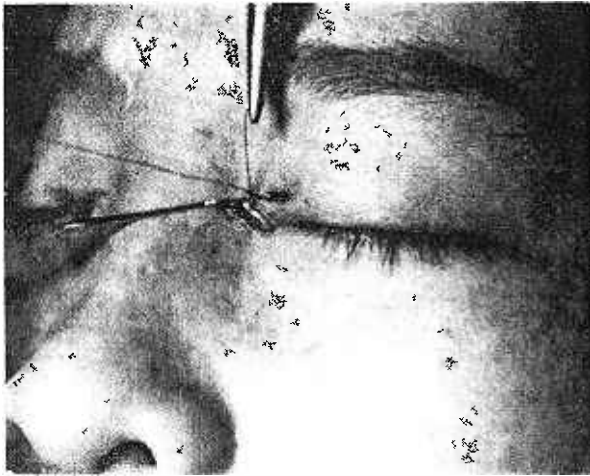


Fig. 7d. The lower flap stitched first. The upper flap is held aside with a skin hook.

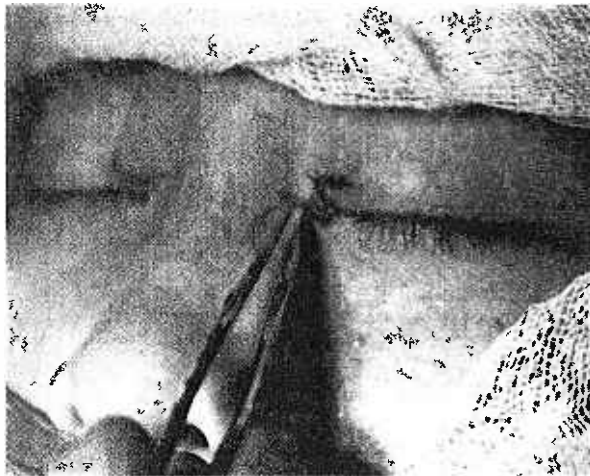


Fig. 7e. Redundant fold of skin picked up with dissecting forceps. This will have to be trimmed. Note how the flaps fit snugly into one another.



Fig. 7f. Photograph taken of same patient the day after operation. Note the caruncle of both sides fully exposed.

to be trimmed to fit snugly into the raw area left by the lower flap. Experience has shown that in those elderly patients with loose skin around the eyelid, the upper flap can be excised with impunity and the raw area stitched. The writer uses 6-0 atraumatic silk sutures throughout the operation and the two sides are done at one sitting.

The post-operative care is equally simple. The patient is asked to come up daily for cleansing of the wound. The stitches are removed on the 4th day. There is usually very little discomfort or pain, which if present, is relieved with oral Codeine. The immediate result may not be dramatic because hypertrophic scarring may occur in surgical interference with the skin around the canthi (Figs. 1b, and 3b). Johnson (1956) advises very careful handling of the skin flaps, perfect approximation of the skin edges and he leaves no dead spaces under the skin by using gentle pressure for 5-7 days. Fortunately, however, the hypertrophic scars clear up fairly quickly with the passage of time (Fig. 3c)

SUMMARY

The clinical features of the Mongolian Fold (Plica Mongolia) are studied in some detail. This is a fairly common condition amongst the Chinese and the Japanese (both of which come from Mongoloid stock). It is observed that the Mongolian Fold is often associated with a particular type of upper eyelid the clinical features of which are also documented. The principle of the "Z" plasty is applied in its surgical correction. Usually, a single "Z" plasty is sufficient but if the fold is big, then multiple Zs in interrupted series are used. This in the writer's experience, is a useful and safe procedure for the correction of the Mongolian Fold.

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