Comparison of Various Techniques in the Reconstruction of Mohs Chin Defects

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BACKGROUND
- Repair of facial Mohs’ defects represents a common challenge encountered by plastic and reconstructive surgeons
- Chin is historically a difficult area of facial reconstruction
- Well defined with numerous typographic features including convexities and a well-defined submental crease line or concavity

METHODS
- IRB approved retrospective chart review
- All patients undergoing reconstruction of chin defects by senior author JFT following Mohs’ excisional chemosurgery from 2005-2013 were included
- Pre and post-operative photographs were reviewed in addition to defect size, location, operative technique, and post-operative complications
- Patients were excluded if the defect involved the lower lip

SURGICAL TECHNIQUE
- All procedures were for the repair of skin cancers removed by Mohs’ excision
- Linear closure: dog-ears are excised, and then the wound is closed with a complex multilayer fashion using 3-0 Vicryl, 4-0 Monocryl and simple 5-0 Prolene suture
- W-plasty is often used to place the final suture line within the submental crease
- Other choices for more complex defects included local rotational and advancement flaps

RESULTS
- Total of 35 patients were identified over the period in question
- There was a wide range with regards to patient age and race, both sexes were operated on in roughly equal proportions
- Average defect size was 4.29 cm
- Linear closure was performed on 26 patients (72%). Other choices for repair included rhombic flaps (n=3), submental perforator V to Y advancement flaps (n=3), bilobed flap (n=1) and rotational flap (n=1).
- All patients achieved a good final aesthetic result with complete functional maintenance of the lower lip with no lower lip retractions.
- Scars were well healed by second and third follow up appointments.

CONCLUSIONS
- Optimal chin reconstruction is defined by successful wound closure, careful scar placement and minimal post-operative complications
- Should be accomplished by taking advantage of the inherent characteristics of the chin
- In most small defects of the chin, primary closure is attainable
- In larger defects of the chin, recruitment of flaps from the cervical region is preferred, with submental island flaps most commonly used.

LIMITATIONS
- Retrospective nature
- Relatively small sample size
- Patients taken from only one surgeon’s practice
- Time of follow-up
- Did not take into account for pre-operative comorbidities which may affect wound healing