

Introduction

Cutaneous defects of the head and neck region arise following tumor excision, trauma, or infection. These defects are particularly challenging to reconstruct because of the complex anatomy and the dual need for functional preservation and aesthetic restoration. Over the years, many reconstructive options have been developed, but local flaps-such as rhomboid, advancement and bilobed flaps, remain a cornerstone for reconstructing small to medium-sized defects in the head and neck region because of their reliable vascularity, tissue similarity, and potential for single-stage repair. This study presents the outcomes of 17 patients with head and neck defects treated with various local flap techniques at Alexandria Main University Hospital, focusing on cosmetic results, complications, and functional recovery.

Aim of the Work

To assess the outcome of different local flap techniques in reconstruction of head and neck defects with regard to cosmetic results, complications, and time to return to normal life.

Patients and Methods

This descriptive case series included 17 patients with head and neck cutaneous defects treated at Alexandria Main University Hospital between September 2023 and September 2024. Patients’ age ranged from 3 to 85 years (mean 41.8 ± 24.8). The pathologies included basal cell carcinoma, squamous cell carcinoma, fibroinflammatory lesions, cysts, granulomas, and dermatofibroma. Reconstruction was performed using a variety of local flaps such as rhomboid, advancement, bilobed, rotational, interpolated, and staged pericranial with free flap. Data collected included operative time, hospital stay, cosmetic outcome (graded on a 4-point scale), time to return to daily activity, and postoperative complications.

Results

Table 1: Distribution of the studied cases according to Flap and operative time (n = 17)

	No.	%
Flap		
Interpolated	2	11.8
Transposition rhomboid flap	5	29.4
Bilobed flap	3	17.6
Rotational local flap	1	5.9
Advancement flap	5	29.4
Special flap	1	5.9
1 st Operative time (hr.)		
Min. – Max.	1.0 – 45.75	
Mean ± SD.	16.10 ± 16.65	
Median (IQR)	10.17 (1.50 – 30.50)	
2 nd Operative time (hr.) (n = 2)		
Min. – Max.	1.0 – 2.0	
Mean ± SD.	1.50 ± 0.71	
Median (IQR)	1.50 (1.0 – 2.0)	

IQR: Inter quartile range
SD: Standard deviation

Table 2: Distribution of the studied cases according to different parameters (n = 17)

	No.	%
Time of stay		
Patients needing hospitalization for a long period of time (due to other conditions)	3	17.6
Discharged on the same day	14	82.4
Cosmesis		
Bad (1)	1	5.9
Fair (2)	7	41.2
Good (3)	7	41.2
Excellent (4)	2	11.8
Return to normal life (week) (n = 15)		
Min. – Max.	0.43 – 4.0	
Mean ± SD.	1.30 ± 0.91	
Median (IQR)	1.0 (0.86 – 1.71)	

IQR: Inter quartile range
SD: Standard deviation

Table 3: Distribution of the complicationsin the studied cases (n = 17)

Complication	Number of Cases
Mild infection	4
Scar (mild/ small / contraction / healing by scar)	5
Hematoma (requiring evacuation)	1
Wound dehiscence	2
Auricular cartilage necrosis	1
Color/ texture mismatch	1



Figure : Bilobed flap for angle of mouth lesion.

Conclusion

Local flaps provided reliable and effective reconstruction for head and neck cutaneous defects, with most patients achieving good to excellent cosmetic results and early return to daily activities. Complications were generally mild, such as superficial infection or scar contracture, and were managed conservatively. Rhomboid and advancement flaps were the most frequently used, reflecting their versatility and reliability. Oncologic safety was maintained with adequate surgical margins, and staged reconstruction proved valuable in recurrent or high-risk tumors.