

THE KEYSTONE ISLAND FLAP: OUR EXPERIENCE IN SKIN ONCOLOGICAL RECONSTRUCTION

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Introduction

The keystone design fasciocutaneous island flap has gained popularity in the last few years. Its use has negated the need for skin grafting following oncological excisions in increasing numbers of patients. We present our experience of thirty-one consecutive cases with this form of reconstruction in this uncontrolled case series.

Methods

Data regarding demographic details, primary tumour, operative details, and outcome were collected prospectively. The study's primary end points were complication rates and aesthetic outcome which was determined using a modified questionnaire with visual analogue scales.

Results

All patients underwent day-case reconstruction of oncological defects (BCC 6/31, melanoma 15/31 and SCC 10/31) with an average width of 3.1cm in lower limbs (22/31), upper limb (2/31), trunk (1/31). Reconstructions comprised 18 standard, 10 modified and 3 double-opposing keystone type flaps. Mean operative time was 58 minutes. Overall complication rate was 3.2% (delayed healing 1/31) with no partial or total flap loss. Quantitative analysis of visual analogue scores demonstrated high satisfaction rates.

Conclusions

Our series demonstrates that the keystone flap is a reliable, reproducible and effective surgical technique for reconstruction of selective defects with low complication rates and favourable functional and aesthetic outcomes.