Economic evaluation of surgical excision with margins versus Mohs micrographic surgery for periocular basal cell carcinoma

Taras Gout[1], **George Kalantzis**[1], Graeme Stables[2], Nabil El-Hindy[1], Sreedhar Jyothi[1], Lien Brett[1], Egle Rostron[1], Bernard Chang[1]

Right upper lid basal cell carcinoma

Conclusion

Enhanced risk stratification of periocular BCC using the British Association of Dermatology guidelines has been associated with improved clinical and tariff outcomes.

Future prospective multi-centre studies with more in-depth tariff assessment would allow for a more accurate economic evaluation.

Introduction

Economic evaluations of surgical procedures are important to the improvement of healthcare provision.

Basal cell carcinomas are the most prevalent cancers in Europe, USA and Australia. In addition, their incidence rate is increasing.

Aim

To our knowledge, there has been no previous published reports of the economic evaluations of Surgical Excision with Margins (SEM) versus Mohs Micrographic Surgery (MMS) for basal cell carcinomas specific to the periocular region.

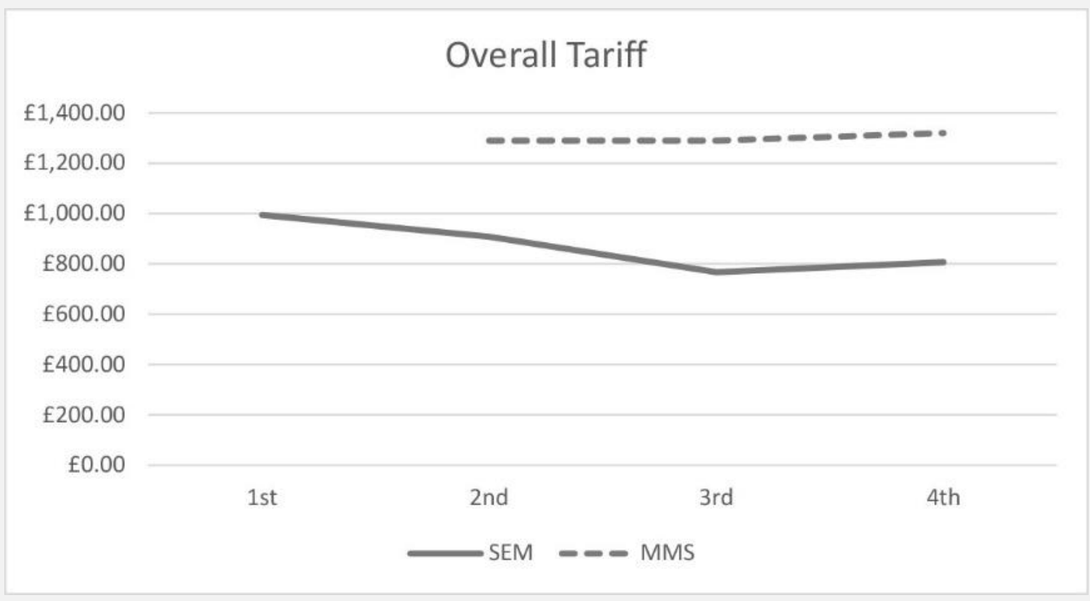
Methods

This retrospective single centre study compared four study periods spanning over 20years.

Since the local introduction of MMS there has been an incremental broadening of local referral criteria to come in line with the British Association of Dermatology guidelines.

Economic evaluation was undertaken using local Healthcare Resource Groups (HRG) tariffs for treatments classified under the Office of Population Censuses and Surveys (OPCS-4).

Financial comparison assumed identical pre-procedure and post-procedure tariffs. An overall tariff was used to express the sum of the baseline procedures (SEM versus MMS) and an average of additional procedures (further excisions or complications).



Line chart demonstrating the trend in overall procedure tariffs for SEM and MMS over the four study periods

Results

Over the four study periods SEM has maintained a lower tariff cost than MMS. The general trend is a reduction of overall SEM cost, which correlates to improved first clearance and recurrence rates. In the final study period, the overall tariff for SEM was £806.38 and for MMS was £1319.86.

	1st Study SEM	1st Study MMS	2nd Study SEM	2nd Study MMS	3rd Study SEM	3rd Study MMS	4th Study SEM	4th Study MMS
Number of procedures	86	NA	26	46	35	29	68	96
CLINICAL OUTCOMES								
Clearance after 1st Operation	59%	NA	77% (20/26)	100% (46/46)	91% (32/35)	100% (29/29)	91.2% (62/68)	100% (96/96)
Complications incurring tariffs		NA					2.9% (2/68)	3.1% (3/96)
Recurrence	1.7%	NA			0% (0/35)	0% (0/29)	0% (0/68)	0% (0/96)
ECONOMIC OUTCOMES								
Baseline Procedures	£701.66	N	£701.66	£1289.84	£701.66	£1289.84	£701.66	£1289.84
Additional Procedures	£292.83	NA	£205.66	£0	£65.37	£0	£104.72	£30.02
Overall Tariff	£994.49	NA	£907.32	£1289.84	£767.03	£1289.84	£806.38	£1319.86
MMS REFERRAL CRITERIA								
		NA	*over 2cm diameter *infiltrative subtype *undefined margins *recurrent lesions		Additional Criteria: *medial canthal		Additional Criteria: *PNI or PVI *any non-nodular subtype	

1 St James' University Hospital, Leeds, UK
2 Leeds General Infirmary, Leeds, UK

The Leeds Teaching Hospitals NHS Trust

Leeds Centre for Ophthalmology