

PHOTODYNAMIC THERAPY IN THE MANAGEMENT OF BASAL CELL CARCINOMA: RETROSPECTIVE EVALUATION OF OUTCOME

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PDT

- A relatively new technique in managing tissue pathologies.
- We looked at the management of BCCs using this technology

Prospective study

- 148 patients with BCCs
- Treated with surface illumination 5-ALA-PDT or mTHPC-PDT
- Comparisons were made with the
 - Clinical features
 - Rate of recurrence
 - Overall outcome were made

Parameters

- Surface illumination PDT was offered under local or general anaesthesia.
- For thin BCCs ($<1\text{mm}$), 2% 5-ALA cream - applied topically.
- For thick BCCs ($\geq 1\text{mm}$), 0.05mg/kg mTHPC - administered intravenously.
- Lesion response evaluation was carried out according to RECIST.

RECIST at 4 weeks

- Complete response (CR): disappearance of all target lesion
- Partial response (PR): at least a 30% decrease in the sum of the longest diameter (LD) of target lesion
- Stable disease (SD): neither sufficient shrinkage to qualify for PR nor sufficient increase to qualify for progressive disease (PD)
- Progressive disease (PD): at least a 20% increase in the sum of LD of target lesions

Day of treatment

- Shielding of the macroscopically healthy surrounding tissue. Safety margin of 2-3mm
- The laser light delivery fibre (core diameter 400 μ m). The distance from the tip of the fibre to the tumour surface is 5cm with up to 3cm spot diameter.
- For 5-ALA-PDT, a single-channel 628nm diode laser was used for illumination and light was delivered at 100 or 200J/cm² per site.
- For mTHPC-PDT, a single-channel 652nm diode laser was used for illumination and light was delivered at 20J/cm² per site.



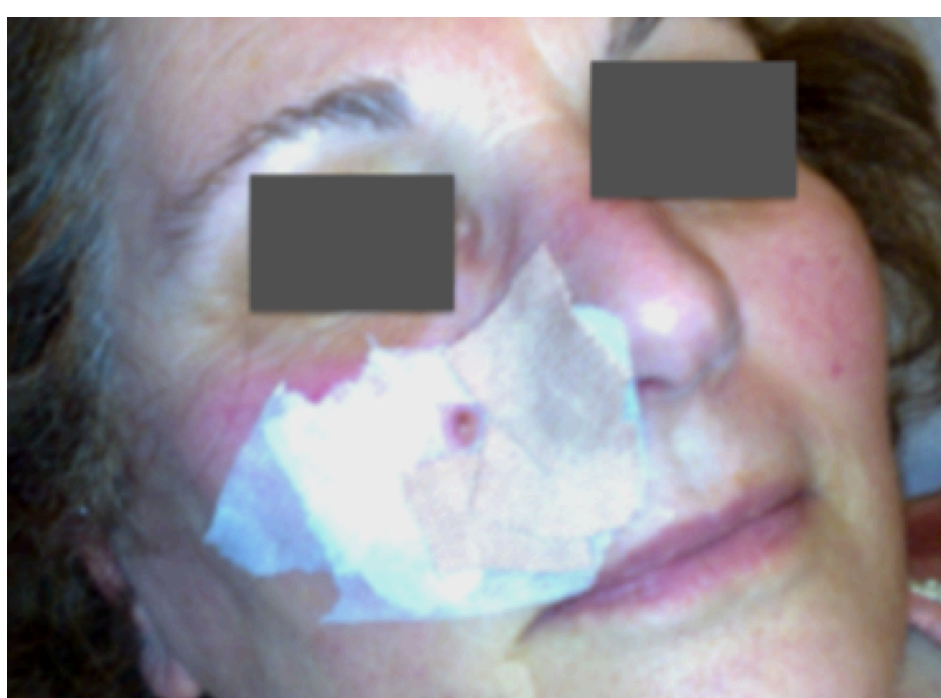
Demographics

- 86 males and 62 females
- Mean age at the 1st diagnosis was 56.3 years.
- Chronic sun bathing was the most prominent risk factor (125 patients)
- 6 patients reported problems with non-healing wounds.
- The treated lesions : nasal area (n=46), upper lip (n=38), forehead (n=26), scalp (n=22).
- Nearly one-third the cohort had history of BCC

	Frequency (%)	BCC vs. 5-ALA-PDT	BCC vs. mTHPC-PDT
Treatment 1	Total of 148 patients	86	62
Complete response	140 (94.6)	80 (93.0)	60 (96.8)
Partial response	5 (3.4)	5 (5.8)	0 (0.0)
Stable disease	3 (2.0)	1 (1.2)	2 (3.2)
Progressive disease	0 (0.0)	0 (0.0)	0 (0.0)
Recurrence	12 (8.1)		
Treatment 2	Total 20 patients	12	8
Complete response	16 (80.0)	10 (83.4)	6 (75.0)
Partial response	2 (10.0)	1 (8.3)	1 (12.5)
Stable disease	1 (5.0)	0 (0.0)	1 (12.5)
Progressive disease	1 (5.0)	1 (8.3)	0 (0.0)
Recurrence	9 (6.1)		
3-year outcome	Total of 148 patients	86	62
Complete response	141 (95.3)	82 (95.3)	59 (95.2)
Partial response	5 (3.3)	3 (3.5)	2 (3.2)
Stable disease	1 (0.7)	0 (0.0)	1 (1.6)
Progressive disease	1 (0.7)	1 (1.2)	0 (0.0)
5-year outcome	Total of 148 patients	86	62
Complete response	137 (92.6)	79 (91.9)	58 (93.6)
Partial response	7 (4.7)	4 (4.6)	3 (4.8)
Stable disease	3 (2.0)	2 (2.3)	1 (1.6)
Progressive disease	1 (0.7)	1 (1.2)	0 (0.0)
Final outcome	Total of 148 patients	86	62
Complete response	136 (91.9)	79 (91.8)	57 (92.0)
Partial response	6 (4.1)	3 (3.5)	3 (4.8)
Stable disease	5 (3.3)	3 (3.5)	2 (3.2)
Progressive disease	1 (0.7)	1 (1.2)	0 (0.0)
Overall recurrence	7 (4.7)		

	Frequency (%)	BCC vs. 5-ALA-PDT	BCC vs. mTHPC-PDT
Treatment 1	Total of 243 BCCs	127	116
Complete response	231 (95.1)	117 (92.1)	114 (98.3)
Partial response	11 (4.5)	9 (7.1)	2 (1.7)
Stable disease	1 (0.4)	1 (0.8)	0 (0.0)
Progressive disease	0 (0.0)	0 (0.0)	0 (0.0)
Recurrence	18 (7.4)		
Treatment 2	Total of 30 BCCs	13	17
Complete response	21 (70.0)	9 (69.2)	12 (70.6)
Partial response	5 (16.7)	3 (23.1)	2 (11.7)
Stable disease	3 (10.0)	0 (0.0)	3 (17.7)
Progressive disease	1 (3.3)	1 (7.7)	0 (0.0)
Recurrence	11 (4.5)		
3-year outcome	Total of 243 BCCs	127	116
Complete response	232 (95.5)	120 (94.5)	112 (96.6)
Partial response	9 (3.7)	6 (4.7)	3 (2.6)
Stable disease	1 (0.4)	0 (0.0)	1 (0.8)
Progressive disease	1 (0.4)	1 (0.8)	0 (0.0)
5-year outcome	Total of 243 BCCs	127	116
Complete response	226 (93.0)	117 (92.1)	109 (94.0)
Partial response	11 (4.5)	5 (3.9)	6 (5.2)
Stable disease	5 (2.1)	4 (3.2)	1 (0.8)
Progressive disease	1 (0.4)	1 (0.8)	0 (0.0)
Final outcome	Total of 243 BCCs	127	116
Complete response	228 (93.8)	118 (92.9)	110 (94.8)
Partial response	9 (3.7)	6 (4.7)	3 (2.6)
Stable disease	5 (2.1)	2 (1.6)	3 (2.6)
Progressive disease	1 (0.4)	1 (0.8)	0 (0.0)
Overall recurrence	9 (3.7)		

Side effects – per patient after 1 st round of treatment		
Anaesthesia		0
Paraesthesia		1
Hypoesthesia	Recovered	3
Hyperesthesia		2
Dysesthesia		0
Hypopigmentation	Recovered	5
Hyperpigmentation		2
Scarring		0
Ulceration		2
Transient milia		0
Rosacea		0
Recurrence		12



Conclusion

- PDT achieved high efficacy in the treatment of BCCs with greatly reduced morbidity and disfigurement.
- The technique is simple, can commonly be carried out in outpatient clinics, and is highly acceptable to patients.

Thank you

- Questions?