Laser treatment in early head and neck cancer

ABSTRACT

We have performed a retrospective review of all patients treated with primary, curative-intent Carbon Dioxide or Holmium-YAG laser resection of head and neck squamous cell cancer, excluding oral cavity and lip. Relevant details were found in 48 patients. Any further malignant disease occurring after 5 years from the original surgery were called new primaries. Of 29 T1a cancers of the glottis treated, all were controlled with local carbon dioxide laser resection. Four T1b cancers were treated, all of these recurred and required radical surgery and/or radiotherapy.

Five out of 6 (83.3%) T2 glottic cancers were succesfully treated with laser resection, as were five early (stage T1 and T2) oropharyngeal cancers and three T1 supraglottic cancer.

Two post radiotherapy recurrences, a T2 glottic and T1 supraglottic were also succesfully treated by local laser resection. The average follow up is 26.6 months, which is the mean of the time taken for the cancer to recur, or the time disease free post treatment.

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Patients who had undergone laser excision of early head and neck (but not oral cavity or lip) squamous cell cancer were identified via the operating theatre computerised log at St Bartholomew's Hospital, and by recording patients attending the Head and Neck clinic at this Hospital, which is a Head and Neck Cancer Centre. Data was recorded from the notes . Required information was available in 48 cases.

All patients were followed up as per the standard St. Bartholomew's protocol, being seen monthly for the first year after definitive treatment, 2 monthly for the second year, 3 monthly for the third year, 6 monthly for the fourth year and yearly thereafter.

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INTRODUCTION

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METHODS AND MATERIALS

RESULTS

Of 29 T1a cancers of the glottis treated, all were controlled with local carbon dioxide laser resection. Four T1b cancers were treated, all of these recurred and required radical surgery and/or radiotherapy. Five out of 6 (83.3%) T2 glottic cancers were successfully treated with laser resection, as were two early (stage T1 and T2) oropharyngeal cancers (Holmium-YAG) and three T1 supraglottic cancers (1 Holmium YAG).

No.	Initial	Site	Stage	No of Iaser rx	Time post treatment until recurrence (months)	Treatment of recurrence	Progress after recurrence
1	RR	Glottis	T1b	2	12	Laryngectomy + RT	Well
2	MS	Glottis	T1b	2	12	RT	Well
3	MF	Glottis	T1b	1	18	RT	Well
4	AI	Glottis	T1b	1	3	laryngectomy, neck dissection, pedicled flap reconstruction and RT	Well







RESULTS

Table 2

No.	Initial	Site	Stage	No of initial la- ser rx	Time post treat- ment until recurrence (months)	Treatment of recurrence	Progress after recur- rence
1	SW	Glottis	T1a	1	18 NR		
2	CN	Glottis	T1a	1	42	Laser	Well
3	TW	Glottis	T1a	1	50 NR		
4	KS	Glottis	T1a	1	36 NR		
5	FW	Glottis	T1a	1	84 NR (node recurrence at 70 months)	Node dissec- tion	Well
6	AS	Glottis	T1a	1	12	Laser	Well
7	PM	Glottis	T1a	1	62 NR		
8	RF	Glottis	T1a	1	36 NR		
9	МС	Glottis	T1a	1	8 NR		
10	RM	Glottis	T1a	1	8 NR		
11	МС	Glottis	T1a	1	96 NR		
12	WR	Glottis	T1a	2	12 NR		
13	DL	Glottis	T1a	1	12 NR		
14	HG	Glottis	T1a	1	6 NR		
15	ТМ	Glottis	T1a	1	12 NR		
16	GS	Glottis	T1a	1	84	RT	Well
17	RF	Glottis	T1a	1	13 NR		
18	*PC	Glottis	T1a	1	27 NR lost to follow up		
19	GB	Glottis	T1a	1	NR		
20	JM	Glottis	T1a	1	NR		
21	MD	Glottis	T1a	1	NR		
22	АК	Glottis	T1a	1	NR		
23	PB	Glottis	T1a	1	NR		
24	RH	Glottis	T1a	1	NR		
25	WC	Glottis	T1a	1	NR		
26	GK	Glottis	T1a	1	NR		
27	AES	Glottis	T1a	1	9/12 recurrence	laser	NR
28	KS	Glottis	T1a	1	NR		
29	PW	Glottis	T1a	1	NR		

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CONCLUSIONS

In a tertiary head and neck cancer centre, with the relevant equipment and surgical plus nursing expertise, local laser resection of early squamous cell cancer of the head and neck can provide a cost effective and viable alternative to traditional methods of treatment, whilst also reducing patient discomfort and disruption to a minimum. As has been found elsewhere, T1b glottic cancers should be treated more radically, with external beam radical radiotherapy the first line treatment of choice.

Table 3 - Supraglottic

No.	Initial	Site	Stage	No of Iaser rx	Time post treatment until recurrence (months)	Treatment of recurrence	Progress after recurrence
WC	Supraglottis	T1	1	12 NR			
ow	Supraglottis	T2	1	NR			
PF	Supraglottis	T2	1	12 NR			
WF	Supraglottis	T1			40 months recurrence	laryngectomy	

Table 4 - T2 glottic

No.	Initial	Site	Stage	No of laser rx	Time post treatment until recurrence (months)	Treatment of recurrence	Progress after recurrence
1	AI	Glottis	T2	1	75 NR		
2	MD	Glottis	T2	2	11 NR		
3	RG	Glottis	T2	1	20 NR		
4	PB	Glottis	T2	1	8	RT	Well
5	GH	Glottis	T2	2	36 NR		
6	HS	Glottis	T2	1	18 NR		

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