Surgical Management of Paediatric Transglottic Granular Cell Tumour

W Ahmed, , N Amin, ME Wyatt, CG Jephson
Department of Otolaryngology, Great Ormond Street Hospital, London. UK

I N T R O D U C T I O N

Granular cell tumours (GCTs) are rare soft tissue neoplasms. Laryngeal GCTs are uncommon, accounting for 6-10% of all reported cases [1]. Due to their indolent nature, they may be misdiagnosed until progression of airway symptoms occurs.

Most laryngeal GCTs are isolated to a laryngeal subunit and the majority of published cases undergo successful curative resection. Only one transglottic case is briefly noted in the literature [2]. We report the first two cases of paediatric transglottic GCTs. One case is currently undergoing treatment and in the other curative resection has been achieved.

A literature review was performed to ascertain the pattern of GCT involvement and surgical approaches utilised.

C A S E A

- An 8-year-old female presented with a prolonged history of a persisting cough and irritable throat.
- Examination revealed a laryngeal mass
- Microlaryngoscopy revealed a large glottic/subglottic tumour. Biopsy confirmed GCT.
- Four staged laryngoscopic resections were carried out over 2012/2013 to achieve clearance (microdebrider and cold-steel).
- The final laryngoscopic examination revealed no residual disease, with normal laryngeal structure and function.

December 2012

February 2013

4

March 2014

February 2015

C A S E B

- An 8-year-old female presented with nocturnal difficulty in breathing.
- Examination revealed a large laryngeal mass.
- Microlaryngoscopy noted a large glottic/subglottic mass which was debulked in January 2017.
- Multiple staged resections were conducted over 2017 & 2018.
- Disease clearance has been difficult to achieve due to extensive involvement of the posterior larynx and transglottic nature of the GCT.
- Currently ongoing further observation/treatment.

December 2016

January 2017

October 2017

May 2018

L I T E R A T U R E R E V I E W

A review of the literature was conducted utilising primary and secondary sources. Key words used: (granular cell tumour/tumor AND larynx) OR (granular cell myoblastoma AND larynx). A total of 54 papers were identified, compromising of 116 laryngeal GCTs.

Of the cases reported 53 were male, 56 female, and unknown in seven cases.

Only 19 paediatric GCTs have been reported, with a significant proportion occurring in the subglottic when compared to adults.

Subsites	Adults	Paeds	Not defined	Total
Transglottic	0	0	1	1
Supraglottis	10	0	6	16
Glottis	42	10	27	79
Subglottis	2	8	3	13
Unknown	1	1	5	7

Approach	Larynx subsite	Number of cases
Laryngoscopic	Supraglottic	5
	Glottic	38
	Subglottic	5
	Transglottic	1
	Undefined	33
Laryngofissure	Supraglottic	0
	Glottic	3
	Subglottic	3
	Undefined	1
Laryngectomy (partial)	Supraglottic	0
	Glottic	4
	Subglottic	4
Unknown	Supraglottic	5
	Glottic	10
	Subglottic	1
	Larynx	3

C O N C L U S I O N S

- The majority of cases can be dealt with laryngoscopically.
- Staged resection may be necessary to obtain clear surgical margins
- Transglottic tumours are challenging – appropriate surgical resection/dissection whilst maintaining anatomical structure and function.

References
1. Scala WA, Fernandes AM, Duprat Ade C, Costa HO. Granular cell tumor of the larynx in children: a case report. Braz J Otorhinolaryngol. 2008 Sep-Oct;74(5):780-5.
2. Friedman AD, Burns JA, Lutch MJ, Zeitels SM. Submucosal neoplasms of the laryngeal introitus. J Laryngol Otol. 2012 Jul;126(7):706-13.