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Title: Endoscopic balloon dilatation in idiopathic tracheal stenosis – An Australian experience

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**Body:** Introduction Idiopathic tracheal stenosis (ITS) is a rare inflammatory disease of unknown etiology which is characterised by stenosis of upper part of trachea. Single stage laryngeotracheal resection has been the definitive treatment but endoscopic methods are gaining popularity. Balloon dilatation as the treatment for ITS, is a relatively new procedure with limited data available regarding its efficacy. Aim To analyse the usefulness of endoscopic balloon dilatation for treatment of ITS. Material and Methods Retrospective single centre study of patients treated with endoscopic balloon dilatation, for ITS. Results Six patients were treated for ITS, with balloon dilatation between 2008-2011. All the patients were females and the average age was 51 years (Range 29-77). The average time between the onset of symptoms and diagnosis was 27 months. Pulmonary function test data could be located for only three patients and all three had evidence of fixed airway obstruction in their flow-volume loops. Bronchoscopy showed proximal stenosis in majority of cases (5/6 i.e. 83%). The majority of stenoses (5/6 i.e. 83%) were circumferential in appearance. Balloon dilatation was effective in increasing tracheal lumen and improving symptoms in all (100%) the patients. All the patients tolerated the procedure well and there were no significant complications. Fifty percent (3/6) of patients required repeat dilatation (average number of dilatations 3.3) and the average interval between repeat procedures was 7 months. Conclusion Endoscopic balloon dilatation is an effective, low-risk procedure for treatment of patients with ITS.