



Intralesional steroid injection and dilatation for subglottic stenosis in patients with Wegener's granulomatosis- a review of literature

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Abstract

Subglottic stenosis is one of the major complications of the Wegener's granulomatosis. There are no set guidelines available for management. Intralesional steroid injection and dilatation seems to be a safe and successful method of treatment. We report a review of available literature on intralesional steroid injection and dilatation for subglottic stenosis in patients with Wegener's granulomatosis.

Introduction

Wegener's granulomatosis is a rare autoimmune disease, predominantly affects middle aged males. Subglottic stenosis is one of the complications seen in the patients with upper airway involvement (10-20% of all cases) ¹ even when the disease is in the remission. As a result of better systemic control and improved life span of the patients suffering from Wegener's disease increasing number of the patients are expected to present with subglottic stenosis². Despite being a major issue for the consultants dealing with these cases and troublesome for the patients who are in remission, there are no set guidelines for the management of this condition.

It is suggested that the stenosis of the subglottic region results from scarring of the inflamed upper airway, however in some cases localised inflammation in the region leading to stenosis was the only symptom of the Wegener's disease. It is also thought that extensive surgery would lead to more scarring and worsening of the condition but recently a number of surgical options have been tried including reconstruction of the region, in the patients with remission, however there was associated interference with phonation and/or long term morbidity. The most attractive results from the author's point of view were of the intralesional steroid injection and dilatation. The studies presented have a very small number of patients or were case reports; hence we now report review of these studies.

Literature search was done using PubMed database with key words "Wegener's granulomatosis/ disease / Subglottic stenosis/ Intralesional steroid injection" Final search was done on 24th January 2021. All the studies reporting results of intralesional steroid injection in the subglottic stenosis in patients with Wegener's Granulomatosis were included. There was no restriction of sample size; even case reports were considered given the fact of rare condition and comparatively new approach of

management.

A total of 5 publications were found including 2 case reports and 3 case series. A total of 46 patients had intralesional steroid injection with dilatation. None of the patients required tracheostomy and 47% of the patients required more than one session. There was no major adverse effect of the procedure reported in any of the studies. An additional relatively recent study has been reported in children with compromised air way due to Wegener's, the study suggested that children require surgical management for correction of their airway eventually even after intralesional injection therapy with corticosteroids³ The same study has reported extensive review of literature which also reported only a few cases.

The review of the studies showed promising results of intralesional injection and dilatation in patients with subglottic stenosis developed as a complication of Wegener's granulomatosis. There was 100% success rate of the procedure in all studies and none of the patients required tracheostomy^{4,5}.

The surgical procedures in the Wegener's Granulomatosis have a higher rate of recurrence as well as long term morbidities. Most of the procedures e.g. partial cordectomy or tracheostomy, and even reconstruction have higher morbidities and undue stress to the patients affecting their quality of life^{6,7}. For the patients who are in the remission and responded well to steroid therapy, and given the suspicion of more scarring following their surgery, intralesional injection is an attractive option. Most of the studies reported on the subject have a day care procedure, minimal stay to the hospital and with long term good results in association with prevention of unnecessary surgical trauma ^{1, 2, 8}. There is no standard treatment for this condition in patients with Wegener's Granulomatosis available at this stage to compare with, but it is strongly recommended to opt this option as first line management in patients with troublesome stenosis.

The study has limited importance as there was a small number of studies with a small sample size and some were merely case reports, hence prospective studies with long term follow-up and acceptable sample size are required to set guidelines for recommendations for management of this condition.

We conclude that from the evidence given, it is suggested that the intralesional steroid injection with dilatation of the stenosis is safe and successful method in most cases and should be used as the first line of management in these cases. Larger prospective studies are required to set the guidelines.

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