What five things did we learn about airway stenosis and its treatment during 2021?

What we learned		What this means
1. Resection surgery does not require a chin stitch (it may even cause issues)  **Reading**: Schweiger T, Evermann M, Roesner I, Frick A-E, Denk-Linnert D-M, Klepetko W et al. **Laryngotracheal resection can be performed safely without a guardian Chin stitch—a single-centre experience including 165 consecutive patients**. Eur J Cardiothorac Surg 2021; https://doi:10.1093/ejcts/ezab092	A guardian chin stitch has been used to stitch a patient's chin to their chest to prevent potentially damaging movement of the head/neck after a resection surgery. While many resection surgeries are no longer conducted with use of a chin stitch, others continue to use this. Possible complications from use of the stitch includes para-/tetraplegia (inability to voluntarily move the upper and lower parts of the body ie paralysis). This paper supports the use of a head cradle rather than a chin stitch, based on 165 resection surgeries.	If you decide to proceed with a resection surgery, talk to your doctor about their planned technique. If a guardian chin stitch is part of the plan, discuss whether this is necessary or whether a head cradle can be used instead. Point your doctor towards this paper for further reading if appropriate.
What we learned		**What this means**
2. Peak Expiratory Flow (PEF/Peak Flow) is important to measure to monitor your airway health  **Reading**: Song SA, Santeerapharp A, Choksawad K, Franco RA Jr. **Reliability of peak expiratory flow percentage compared to endoscopic grading in subglottic stenosis.** Laryngoscope Investigative Otolaryngology. 2020;1–7. https://doi.org/10.1002/lio2.492 Sungjin A. Song, MD ; Guri Sandhu, MD; Ramon A. Franco Jr, MD **Should We Routinely Use Pulmonary Function Testing in the Management of Subglottic Stenosis?** Laryngoscope. 2020; https://doi.org/10.1002/lary.28678	It's an excellent method of monitoring your airway health without the need to be scoped in your doctor's office – saving both you and your doctor time in potentially unnecessary appointments and check ups. Not only is it easy and affordable, but it provides factual evidence of how quickly your airway narrows, and with regular recording allows you to provide visual evidence to support a remedying injection or dilation surgery.	Purchase a Peak Flow Meter online and start measuring. Record your number in an app, spreadsheet or just a notepad if that is easiest for you. Suggested apps include the Peak Flow section of the 'Health' App on iPhones, or downloading the free AsthmaMD app. We recommend trying to measure daily – integrating your peak flow with another habit, such as cleaning your teeth in the morning. **How about you make it your new habit?**

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3. Execution and success rates of the Maddern Procedure **Reading:** Ruth J. Davis, MD, Ioan Lina, MD et al **Endoscopic Resection and Mucosal Reconstitution With Epidermal Grafting: A Pilot Study in Idiopathic Subglottic Stenosis** American Academy of Otolaryngology–Head and Neck Surgery Foundation June 2021 https://doi.org/10.1177/01945998211028163	Endoscopic Resection and Mucosal Reconstitution with Epidermal Grafting – also known as the Maddern Procedure (after Jan Maddern, the first patient to have this operation) has been conducted on airway stenosis patients since 2012. While a major surgery, this is conducted endoscopically, meaning there is minimal risk to vocal cords and voice. As an operation it has a low complication rate and offers a long-term solution to breathing issues. If the surgery fails, a resection (CTR) remains an optional solution.	This procedure is recommended as an option for patients who are having frequent dilations and want a longer term solution. It is suitable for patients for whom: • Disease is restricted to the mucosa (not including the cartilage) • The scar is not dense (which is more challenging to remove) – (crico-)tracheal resection (CTR) is more suitable in this situation. Post operatively, while the airway remains open, patients do complain of excess mucous. Use of cheek grafts rather than thigh grafts could offer a solution to this.

What we learned		What this means
4. Recipients of steroid injections should be monitored for side effects  **Reading:** Neeve J, Schuman A, Morrison R, Hogikyan N, and Kupfer R **Serial Intralesional Steroid Injection for Subglottic Stenosis: Systemic Side Effects and Impact on Surgery-Free Interval**. OTO Open 2021 Oct-Dec 2021. DOI: 10.1177/2473974X211054842	Last year we heard how successful steroid injections have been at increasing the time between surgeries for patients This paper looks at the potential side effects patients can have from these injections, following 19 patients over a four year period. They found that 91% of their patients extended their surgery-free time by an average of 4.6 months. Around one in three patients had some kind of side effect from the injections.	For many patients, steroid injections can extend the time between surgeries. They are relatively quick and do not involve a general anaesthetic, making them an appealing alternative to dilation surgery. Surgeons need to remind patients of the potential risks, however, so they can be monitored. These include: • Temporary facial acne and rash • Temporary hives • Central serous chorioretinopathy (fluid behind the retina of the eye) • Cushing's syndrome (Common symptoms of Cushing's syndrome include more body fat on your chest, tummy, neck or shoulders. Your face may also be red and puffy.)

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5. Cough and mucous are a major quality of life issue for patients with airway stenosis  **Reading:** Clunie GM, Anderson C, Savage M, Hughes C, Roe JWG, Sandhu G, McGregor A, Alexander CM. **"A Major Quality of Life Issue": A Survey-Based Analysis of the Experiences of Adults With Laryngotracheal Stenosis with Mucus and Cough.** Ann Otol Rhinol Laryngol. 2022 Sep;131(9):962-970. **doi: 10.1177/00034894211050627**	While the primary focus by doctors is (and should be) breathing, cough and mucous are also a concerning side effect experienced by many (84%) patients, and rarely addressed by doctors. Many patients experience psychological impacts from this, impacting their overall self confidence, and work and personal relationships. In addition, mucous plugs have killed airway stenosis patients in the past, so it needs to be an issue taken more seriously. There is a lack of clear advice offered to airway stenosis patients regarding how to manage their cough and mucous.	Patients should make sure they raise the issue of cough and mucous with their doctor, if it concerns them, and get advice regarding approaching and reducing this. This may be as simple as a recommendation of nebulising, with details of what to use (eg normal saline or hypertonic saline) and how frequently to do so. These are important issues to address and should not be downplayed because they do not have a surgical solution.

Living with idiopathic subglottic stenosis support community:
www.facebook.com/groups/airwaystenosis