

Voice Prostheses: Their Flip Side

In this edition, we are publishing an article by Halkud et al regarding problems associated with voice prosthesis. Voice prostheses have been available commercially since 1980s and are presently the best means for voice rehabilitation following laryngectomy. They are very popular because of the ease of insertion, better voice outcomes and superior rehabilitation compared with other options available. However, they are not entirely problem-free and have several unique problems and complications regarding which the clinician must be aware of.

Most common problem faced with the prosthesis is of leakage. Leakage can be periprosthesis or through the prosthesis. Persistent silent leak may lead to aspiration pneumonitis. Leakage through the prosthesis can occur due to faulty valve mechanism or due to collection of debris; for this, the prosthesis should regularly be cleaned properly. Microbial colonization of the prosthesis (commonly by *Candida* species) can also cause damage to valve functioning. Gastroesophageal reflux has also been implicated in several cases. Topical antifungals are applied over the prosthesis to reduce the *Candida* colonization. Nowadays, *Candida*-resistant prosthesis having longer life-span are also available. They are made up of fluoroplastic material and may have a silver oxide coating. Consumption of curd has been shown to reduce the *Candida* infection. Antireflux medications have also been recommended routinely in few studies. If the prosthesis valve mechanism has become faulty, then the prosthesis needs to be replaced.

Periprosthesis leak occurs if the prosthesis is too long causing pistoning and dilating effect, due to thinning of party wall or postirradiation. In such cases, a silicon ring may be placed around the prosthesis to prevent the leakage. Purse string sutures may be taken around the tracheoesophageal fistula. Local injections with collagen have also been attempted. If the fistula has become too large, then the prosthesis may be removed, and reinsertion can be attempted after giving it 2 to 4 weeks to reduce in size.

Granulation tissue may develop surrounding the prosthesis due to constant irritation. These may bleed at time. If troublesome, they may be removed with the help of cautery or laser. Prosthesis extrusion can occur during cleaning or violent cough spell. If it falls into trachea, then it needs to be taken out with the help of a bronchoscope. Many a times, the pharyngoesophageal segment may be hypertonic or spasmodic. In such cases, botulinum toxin injection may be tried or a myotomy may be required.

In Indian setup, where most of the patients are poor and nonaffording, the high cost of the prosthesis may be an issue as prosthesis needs to be replaced periodically when their mechanism becomes defective. Patients also require dexterity and motivational support to use and maintain the prosthesis.

With proper care and management, voice prosthesis work well and may last for a long time. When dealing with such patients, awareness of various problems associated with prostheses and their proper management is essential.

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