



Dr. Hon Chi Suen (Hong Kong, China)

Dr. Rahul Nayak and Dr. John Agzarian reported a very rare condition, benign esophageal stricture secondary to dyskeratosis congenita, and described in detail how they managed the complication of esophageal stent causing tracheoesophageal fistula and sepsis. They did recognize that stenting is rarely a good option for benign esophageal disease and is prone to complications. They felt that the patient was too malnourished to undergo esophagectomy in the first place. If they come across another similar patient in the future, would they consider using enteral (PEG tube) or parenteral (TPN) route to improve the patient's nutritional status and then go on to perform esophagectomy instead of inserting a stent?



Dr. Rahul Nayak (Hamilton, Canada)

Dr. Suen poses an interesting question. The answer to this really depends on the degree of stricturing a patient is experiencing. If a patient can tolerate their secretions, then we believe a PEG tube would be an excellent option. It would provide them with adequate caloric intake, minimize instrumentation of their native esophagus and likely improve quality of life. In this case, our patient was unable to tolerate their secretions and as such leaving them with a PEG would certainly address the nutritional deficiency. However, it would leave them at risk for developing aspiration pneumonias. The rationale for the stent was to try and address both problems: (I) control of secretions and (II) improve nutrition. In hindsight, this obviously didn't work out as well as we hoped. I would not recommend placing a stent and PEG tube concomitantly as this would create a set-up for aspiration particularly if the stent traverses the gastroesophageal junction.

The use of pre-operative TPN in severely malnourished cancer patients has been well studied and has shown great benefit in reducing infectious and non-infectious complications. Severely malnourished is defined as one of the following: >10% weight loss in the last 6 months, BMI <18.5 kg/m², serum albumin <30 g/L (with no evidence of hepatic or renal dysfunction). Our patient met all these qualifiers and likely would have benefited from pre-operative TPN in a semi-elective setting. The European Society for Clinical Nutrition and Metabolism (ESPEN) would recommend pre-operative TPN for 10–14 days in order to derive a benefit. If we encounter a similar patient in the future, we would start with temporary stenting for 6–8 weeks to provide continuous dilation. If this did not provide lasting relief, we would then proceed with pre-operative TPN for 14 days followed by esophagectomy. Given that this patient is still at high risk for complications a two staged approach (Stage 1: esophagectomy, cervical esophagostomy and G-tube insertion, Stage 2: gastric conduit pull-up for reconstruction with cervical anastomosis) would still be our preferred approach.

Dr. Suen: “I congratulate them on the excellent results of saving the patient from the dangerous complication of tracheoesophageal fistula with sepsis. They used bovine pericardium to repair the tracheal defect. However, bovine pericardium is not a viable tissue. It was denatured with glutaraldehyde. There have been reports that the use of bovine pericardium to repair tracheal defects resulted in sloughing of the patch months after insertion. The authors did not describe the size of the fistula or the size of the patch used for repair. From the CT and endoscopic view, the defect may be at most a little more than 1 cm in size. Would it be possible that the bovine pericardium has sloughed without being noticed? Would they consider using other viable flaps like intercostal muscle flap with the pleural side suturing to the defect?”

Dr. Nayak: “Dr Suen raises an excellent point. It is likely that the pericardial patch that was initially placed may have sloughed off. However, as mentioned we did reinforce it with a serratus muscle flap. In our experience, we have found the tip or distal most end of a long intercostal muscle flap rarely remains viable as the end arterial pressure is quite low after harvest. As such, we would not consider using an intercostal muscle flap. However, the principle of using viable muscle for primary repair or reinforcing a repair is valid. In this case the pericardial patch acted as a temporary bridge until the serratus muscle reinforcement could fuse effectively with the trachea and reduce the risk of a failed repair.”