Tracheo-Innominate Fistula diagnosis and treatment: A single center retrospective evaluation

Rambam Health Care Campus, Haifa, Israel; Interventional Radiology Department

Introduction
Tracheo-Innominate Fistula [TIF] is a rare lethal complication following tracheostomy occurring approximately 1% of cases. Peak incidence is between 3 days to 6 weeks following procedure. In half of the cases, a small sentinel bleed precedes the massive terminal bleeding.

Method
Retrospective review of all CTAs obtained suspecting TIF and TIF cases presented to the Interventional Radiology unit between 2011-2016 yielded two groups:

**Group A:** Positive intention to treat, consisting of 12 patients with tracheostomy + bleeding who were planned for endovascular treatment.

**Group B:** Negative intention to treat consisting of 21 patients with tracheostomy and bleeding who were not suspected to have TIF and used as control group.

Results
Positive CTA was the sole statistically significant difference between the groups with 4 positive scans in group A compared to 0 in group B. Out of 9 patients treated, 6 [66%] were primary success, and 3 [33%] suffered major complications of stentgraft migration. Two other patients were not treated due to lack of equipment and one patient terminated prior to procedure. There were no TIF related deaths in both groups.

Conclusion
CTA was a reliable tool for diagnosing TIF, though was not found to be statistically significant for excluding TIF. Current endovascular technology seems to carry high rate of major complications and thus a noble, site specific stentgraft, should be considered.