

Table 1.

Embolo-sclerotherapy agent	Number of procedures	
	High-flow vascular malformations	Low-flow vascular malformations
Foamed STS 3% only	14	51
Foamed 1% polidocanol only	2	2
Ethanol only	11	2
Foamed STS 3% + ethanol	5	2
3% STS foam + coils	1	0
Ethanol + coils	5	0
Others (ethanol + STS + coils, Gelfoam®, Onyx™)	5	0

Table 2.

Anatomical location	Number of Patients
Brow only	2
Brow, cheek	1
Brow, nasopharynx, upper lip	1
Cheek only	10
Cheek, lip	1
Cheek, tongue	1
Cheek, nose, upper lip, intraoral	1
Chin only	1
Ear only	1
Face, neck, tongue	1
Face, neck, trachea	1
Lip (lower) only	6
Lip (upper) only	5
Face only	5
Jaw only	1
Neck only	5
Neck, shoulder, ear	1
Orbit only	1
Parotid, oropharynx	1
Scalp only	2

Table 3.

Patient	Age (years)/ sex	Anatomy	Procedure	Complication	Treatment and Outcome
1	61/ female (Figure 1)	Left cheek, nose, upper lip, intraoral	Angiography and direct injection EST (7 ml ethanol)	Left upper lip necrosis	Healed following surgical debridement.
2	70/ male	Left scalp	Angiography and direct injection EST (4 ml ethanol)	Occipital skin necrosis	Healed following surgical debridement.
3	41/ female	Left face	Angiography and direct injection EST (6ml 3% STS foamed with air + 5 ml ethanol)	Buccal ulceration and necrosis	Healed with conservative treatment; ongoing residual numbness over scar inside the cheek impeding articulation of speech, improved with speech therapy.
4	35/ female (Figure 2)	Right lower lip	Angiography and direct injection EST (5 ml 3% STS	Right lower lip and oral mucosa ulceration and necrosis	Healed spontaneously in two weeks with full resolution of the ulceration with conservative treatment.

			foamed with air)		
5	37/ female	Brow, upper lip, nasopharynx	Angiography and direct injection EST (3 ml ethanol)	Severe refractory airway compromise by oedema	Intensive care unit admission for airway management including medical treatment of laryngeal oedema with dexamethasone and a tracheostomy. Subsequent ESTs for this patient were carried out with prophylactic tracheostomy and elective high-dependency unit admission for airway monitoring.

Table 4.

Patient	Age (years)/sex	Anatomy	Procedure	Complication	Treatment and Outcome
1	48/ male	Left hemiface	Direct injection EST (9 ml 3% STS foamed with air)	Extensive necrosis of the left maxilla including lip, cheek and alar cartilage.	Improved after surgical debridement, antibiotics, and staged surgical reconstruction by plastic surgeons; first in the form of skin grafting then nasal reconstruction. This caused the patient some degree of cosmetic, functional and psychological disability in the long term.
2	17/ female	Left cheek	Direct injection EST (2 ml 3% STS foamed with air)	Cellulitis	Resolved with oral antibiotics



