TECHNICAL NOTE

Current Practice of Transthoracic Endoscopic Sympathectomy in the South West of England: an E-Mail Survey

A. Z. Khan, S. C. Morgan, I. C. Currie, P. Lewis* and D. R. Lewis

Department of Vascular Surgery, Torbay Hospital, Lawes Bridge, Torquay TQ2 7AA

Key Words: E-mail; Hyperhidrosis; Questionnaire; Transthoracic endoscopic sympathectomy.

Introduction

The first survey in the South West of England found TES to be a safe and effective procedure but only analysed data from two centres. The indications for intervention, surgical and anaesthetic for TES may have changed since publication of these data with improvements in endoscopic equipment and increased experience. The aim of this survey was to review current practice of TES in the South West of England and to assess e-mail as a medium for conducting a survey of surgical practice.

Results

Sixty-one of 78 (78%) surgeons had e-mail addresses and 37 (61%) replied to the questionnaire by e-mail while 33 replied to the postal questionnaire making the total response rate 90%. Twenty-four surgeons with an e-mail address responded to the postal questionnaire. The mean e-mail response time was 20 days (range 1–80 days). Twenty surgeons (30%) performed TES of whom 13 responded to the questionnaire via the Internet.

All surgeons performed TES for palmar hyperhidrosis, 17 (85%) for axillary hyperhidrosis, 5 (25%) for Raynaud’s disease, 2 (10%) for facial blushing and there were 7 (35%) other indications (reflex sympathetic dystrophy, post-thrombotic/embolic limbs, frost bite, angina pectoris, thromboangiitis obliterans, vasculitis). One surgeon used a single axillary port, 11 used two axillary ports and 9 used one infraclavicular and one axillary port. (One surgeon used 2 methods). Only 2 surgeons used a harmonic scalpel. Thirteen of twenty surgeons (65%) attempted to ablate lateral aberrant sympathetic fibres. Double lumen endotracheal tube was used in all centres and 14 surgeons (70%) performed bilateral sympathectomies at a single operation. Methods of perioperative analgesia are shown in Table 2.

* Please address all correspondence to: D. R. Lewis, Department of Surgery, Bristol Royal Infirmary, Bristol BS2 8HW.
sympathectomies being performed per year by an individual surgeon was 6 (range 1–16). Four surgeons had converted to open thoracotomy at some stage in their practice.

Discussion

Since its introduction in 1946, TES has established itself as the treatment of choice for upper limb hyperhidrosis, but is recognised to have better results for palmar sweating. All surgeons responding to the questionnaire performed sympathectomy for palmar hyperhidrosis and the majority performed it for axillary hyperhidrosis. The efficacy of and patient satisfaction with TES for upperlimb hyperhidrosis, facial blushing, facial hyperhidrosis and social phobias have been documented. TES has also been suggested as the treatment of Raynaud’s disease but only a quarter of surgeons performing TES considered Raynaud’s disease to be an indication for surgery. Thromboangiitis obliterans and angina pectoris are interesting...
indications for TES although evidence to support its use is lacking.

Double lumen endotracheal tubes were used in all hospitals in the South West but single lumen intubation is acceptable. The majority of surgeons would perform bilateral sympathectomies under a single anaesthetic although this approach is considered to be unsafe by others. Following reinflation of a lung, provided that time is allowed for pulmonary blood to be re-oxygenated before collapse of the contralateral lung, bilateral procedures are acceptable. This precaution avoids shunting of blood away from reinflated but hypoxic lung tissue while contralateral pneumothorax is induced.

Different port sites have been described and no standard approach was noted within the region. The nerve of Kuntz represents sympathetic connections from the spinal cord to the brachial plexus and may explain some failures after sympathectomy however only 13 of 20 surgeons admitted to making an attempt to ablate these fibres.

Harmonic scalpel was used by two surgeons, the rest used diathermy hook to ablate the sympathetic trunk. Retrograde propagation of current to the stellate ganglion may result in Horner’s syndrome, a risk that is theoretically reduced with the harmonic scalpel. The sympathetic trunk may be excised or each ganglion ablated using a “spot-weld” technique some surgeons suggest that transection of the trunk increases the risk of Horner’s syndrome.

We believe that this is the first survey based on e-mail regarding surgical practice in Great Britain to be published. E-mail was a fast method for conducting the survey but was not popular with all consultant surgeons in the South West. The range of response times was considerable and we do not know why some surgeons with e-mail addresses chose to respond by post. Surgeons with an interest in TES, who comprised mainly vascular surgeons, were as reluctant to use e-mail as those colleagues who do not perform the procedure. Age and IT training may have been important in determining responses.

We did not document postal response times in the current study and this was an oversight on our part. These data would have been of interest to compare speed of response between modalities. Overuse may reduce response rates to electronic questionnaires as clinicians tie of this new technique and the practice of blocking bulk e-mails may hinder the ability of this technology to provide complete data in future studies.

Further work with e-mail will be necessary to understand the complexities of obtaining accurate and representative data from a relatively young technology. Future studies should detail which surgeons prefer to respond on the World Wide Web and why some individuals continue to rely on postal responses.

References


Accepted 22 April 2001