

National Institute for Health and Care Excellence

IP1058 – Endoscopic Thoracic Sympathectomy for primary facial blushing

Consultation Comments table

IPAC date: 12 December 2013

Com. no.	Consultee name and organisation	Sec. no.	Comments	Response
				Please respond to all comments
1	Consultee 1 NHS Professional	1	Training in thoracoscopic surgery should be extensive and include ability to recognise how and when to convert the operation to an open thoracotomy, the training to be able to recognise other intrathoracic conditions not related to sympathectomy. The surgeon should be able to demonstrate their training in thoracic surgery and their knowledge of how to carry out potentially life-saving thoracotomy. The surgeon should know how to assess a patient for fitness to undergo a procedure while ventilated on one lung. The need for these skills is very small by percentage but the risks for a small number of patients are of serious morbidity or mortality	Thank you for your comment. Section 1.4 of the guidance will be changed.
2	Consultee 2 NHS Professional Honorary Secretary, Vascular Society	1	Agreed	Thank you for your comment.

Com. no.	Consultee name and organisation	Sec. no.	Comments	Response
3	Consultee 3 Public	1	<p>Surprisingly, many patients experienced mild recurrent symptoms within the first year; this should always be discussed with patients preoperatively Ann Thorac Surg. 2012 Aug;94(2):401-5. "(CS) developed in 97.1% of the patients, and 82.9% answered that they were disturbed because it was more than they had expected." Yonago Acta medica 2008; Volume 51: Number 3 "STEER 2003 We found insufficient evidence about the benefits of sympathectomy for blushing, psychosocial health or quality of life." STEER 2003; Vol 3: No.4 To date, the benefits or side effects associated with endoscopic thoracic sympathectomy for treating facial blushing have not been properly evaluated and reported. Centre for Clinical Effectiveness - Monash, 2001 Clinicians should provide, without exception images/photographs of patients illustrating what the so-called compensatory sweating looks like. They often feature patient testimonies from happy (fake?) patients, and fail to show how severe this side-effect might be. And patients think that it is 'compensatory', so are not alarmed. However reality can be disastrous. Without fully understanding this, there is no informed consent for these patients.</p>	<p>Please respond to all comments</p> <p>Thank you for your comment.</p> <p>Licht PB, Pilegaard HK, and Ladegaard L. (2012) Sympathicotomy for isolated facial blushing: a randomized clinical trial. Annals of Thoracic Surgery 94:401-5 is included in table 2 of the overview.</p> <p>Yonago Acta medica 2008; Volume 51: Number 3 refers to patients with hyperhidrosis rather than facial blushing.</p> <p>STEER 2003 (Fischbacher C. Sympathectomy for facial blushing) is included in appendix A of the overview.</p> <p>Monash 2001 is included in appendix A of the overview.</p>

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4	Consultee 3 Public	2	<p>Topical ibuprofen inhibits blushing during embarrassment and facial flushing during aerobic exercise in people with a fear of blushing</p> <p>http://www.sciencedirect.com/science/article/pii/S0924977X13002137 We argue that for some of the patients the surgical treatment may be worse than the disease, since intolerable reflex sweating is reported in a high percent of patients. Clin Auton Res (2006) 16:406 A surgical treatment for anxiety-triggered palmar hyperhidrosis is not unlike treating tearfulness in major depression by severing the nerves to the lacrimal glands DOI: 10.1111/j.1365-2133.2006.07547.x I find it unacceptable that in this day you would even consider open sympathectomy. ETS is bad as it is, but the endoscopic method at least limits the injury (and injury response). It is nothing but backwardness if surgeons do not train for endoscopic technique when it is available. But even endoscopic ETS should not be considered minimally invasive. (Surg Clin N Am 84 (2004) 717–734)</p>	<p>Please respond to all comments</p> <p>Thank you for your comment.</p> <p>The list of current treatments and alternatives is not intended to be definitive. Bracha HS et al. (2006) Why are we using surgery as a first line of treatment for an anxiety disorder? Clinical Autonomic Research 16: 406 does not meet the criteria for inclusion into the overview because primary blushing is not the main subject of the paper.</p> <p>Bracha HS et al. (2006) A surgical treatment for anxiety-triggered palmar hyperhidrosis is not unlike treating tearfulness in major depression by severing the nerves to the lacrimal glands. British Journal of Dermatology 155; 1299–1300 because primary blushing is not the main subject of the paper.</p> <p>Palazzo FF et al. (2004) Minimal-access/minimally invasive parathyroidectomy for primary hyperparathyroidism. Surg Clin N Am 84: 717-734 refers to a different procedure. Section 2.3 of the guidance will be changed.</p>
5	Consultee 1 NHS Professional	2	<p>Unlike hyperhidrosis of the palms surgery for blushing may appear successful in the short and medium term but may result in longer-term failures</p>	<p>Thank you for your comment.</p> <p>Section 1.5 of the guidance will be changed.</p>

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6	Consultee 2 NHS Professional Honorary Secretary, Vascular Society	2	Agreed	Thank you for your comment.
7	Consultee 1 NHS Professional	3	Unlike abdominal surgery CO2 insufflation in the chest is more hazardous. The filling pressure of the right atrium is only 5mmHg and pressures above this within the chest can seriously reduce cardiac output with potentially catastrophic results. Intrathoracic pressure must be monitored. Only a small amount of CO2 need be inflated. The lung deflates without high pressure around it the CO2 lowers the potential for N2 to be absorbed from the atmosphere by leakage around port sites. If N2 in significant amounts enters the chest it takes several days to be absorbed unlike CO2	Thank you for your comment. Section 3.2 of the guidance will be changed.
8	Consultee 2 NHS Professional Honorary Secretary, Vascular Society	3	Agreed	Thank you for your comment.

Com. no.	Consultee name and organisation	Sec. no.	Comments	Response
9	Consultee 3 Public	3	<p>The aim might be, but the sympathetic chain has other role than blushing. In fact, the ANS uses the sympathetic chain (disrupted during ETS) as an information 'highway' between the Brain and the viscera. So recommend 3.1 corrected. It is not 'sympathetic nerves' that are cut, it is the sympathetic chain. And this explains the variety of complications and uses of ETS (cardiac for example) 3.2 Please look up anatomy on the sympathetic chain and endoscopy. During surgery the sum. chain is covered by the pleura. The location - ganglia is purely guessed as it is INVISIBLE under the pleura. "disparity between what is known in practice and what appears in the literature The March 2004 edition was quite outstanding, with an excellent editorial reminding the reader that only good results are published. The review on thoracoscopic sympathectomy highlighted the disparity between what is known in practice and what appears in the literature." Association of Surgeons of Great Britain and Ireland, ANNUAL REPORT 2004 No statistically significant association between the CS with age, family history, type of HH and extent of TS http://ejcts.oxfordjournals.org/content/34/3/514.full</p>	<p>Please respond to all comments</p> <p>Thank you for your comment.</p> <p>In 3.2. the guidance explains that “The sympathetic chain is visualised and the chosen part of the chain is divided by electrocautery or endoscopic scissors or surgical clips”.</p> <p>The web address refers to a study on hyperhidrosis rather than primary blushing (Rodriguez PM, Freixinet JL, Hussein M et al. [2008] Side effects, complications and outcome of thoracoscopic sympathectomy for palmar and axillary hyperhidrosis in 406 patients. European Journal of Cardio-Thoracic Surgery 34: 514-519)</p>
10	Consultee 1 NHS Professional	4	<p>The literature is not adequate in this area despite some quite good series. Compensatory hyperhidrosis is very high ,I quote 80%, but authors who use phrases such as sever hyperhidrosis skew the true picture that should be conveyed to pre-op patients. SEvere is often subjective and some patients with small amount of sweat are often seriously disturbed</p>	<p>Thank you for your comment.</p>

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11	Consultee 2 NHS Professional Honorary Secretary, Vascular Society	4	Agreed	Thank you for your comment.
12	Consultee 3 Public	4	DYNAMIC CEREBRAL AUTOREGULATION IS ALTERED BY GANGLION BLOCKADE Circulation. 106(14):1814-1820, October 1, 2002. Sympathectomy induces adrenergic excitability of cutaneous C-fiber nociceptors J Neurophysiol. 1996 Jan;75(1):514-7. SYMPATHECTOMY INDUCES SEVERAL BIOCHEMICAL CHANGES IN SKELETAL MUSCLE Clinical physiology (Oxford, England) (Clin Physiol), Reference: 1988-Apr; vol 8 (issue 2) : pp 181-91 The four case series were not critically appraised because they are prone to bias and have significant methodological problems. These studies represent level IV evidence according to the NHMRC criteria and one should not draw firm conclusions from their findings. CCE, Monash, 2001	Thank you for your comment. Zhang R et al (2002) Autonomic Neural Control of Dynamic Cerebral Autoregulation in Humans. Circulation 106:1814-1820 - this paper describes the role of autonomic neural control of dynamic cerebral autoregulation in 12 healthy humans. J Neurophysiol. 1996; 75:514-7 is an animal study. Clin Physiol. 1988; 8: 181-91 is an animal study. Monash 2001 is included in appendix A of the overview.

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13	Consultee 1 NHS Professional	5	Chronic pain is often related to the size of the port. The distance between the ribs is small in many females and those who use ports of greater than 5mm will grind the nerve above the port against the superiorly placed rib. I am particularly worried by the trend to one large port. I would prefer 2 or even 3 very small ports. In an experience of several hundred patients by using small ports and stopping the 'yawing' movement between ribs I cannot recall many patients with long term pain. I also carry out this procedure in London in young patients and even babies with cardiac abnormalities. The need in these is for very extensive ganglia ablation up into the inferior cervical ganglion. Only once have I seen a temporary Horner's and no permanent ones. This leads me to wonder what the surgeons are doing who have developed HS. Brachial plexus lesions are indirectly caused by idiosyncrasy of the thoracic inlet, poor arm position exacerbated by inexperienced surgeons who keep the arms in these positions for too long.	Please respond to all comments Thank you for your comment. The Committee considered this comment but decided not to change the guidance.
14	Consultee 2 NHS Professional Honorary Secretary, Vascular Society	5	Agreed	Thank you for your comment.

Com. no.	Consultee name and organisation	Sec. no.	Comments	Response
15	Consultee 3 Public	5	<p>The findings by SBU Alert show that poor* evidence is available about ETS as regards side effects, risks, and short-term effects. There is no* scientific evidence demonstrating the long-term results of the method or its cost effectiveness in relation to other methods. SBU Published: 1999-08-30 Revised: 2002-09-30 You can not rely on these 'studies' as evidence of effectiveness, or evidence and summary of side-effects and complications, because the data is not credible."The practice of surgical and chemical sympathectomy is based on poor quality evidence, uncontrolled studies and personal experience." Cochrane Database Syst Rev. 2003;(2):CD002918. Similar pathological effects of sympathectomy and hypercholesterolemia on arterial smooth muscle cells and fibroblasts. Acta Histochemica; Jul2008, Vol. 110 Issue 4, p302-313, 12p sympathectomy greatly reduces ventilation Eur Respir J 1998; 12: 177–184 Acquired cardiovascular disease following Sympathectomy The Journal of Thoracic and Cardiovascular Surgery Volume 137, Issue 3, March 2009, Pages 664-669 elevated susceptibility to ventricular fibrillation after sympathectomy Canadian Journal of Physiology & Pharmacology; Oct2008, Vol. 86</p>	<p>Please respond to all comments</p> <p>Thank you for your comment.</p> <p>The SBU Alert is summarised in the overview, under 'existing assessments of this procedure'.</p> <p>The Cochrane review refers to sympathectomy for neuropathic pain, which is a different indication.</p> <p>Acta Histochemica 2008; 110: 302-313 refers to an animal study.</p> <p>Eur Respir J 1998; 12: 177–184 refers to an animal study.</p> <p>The Journal of Thoracic and Cardiovascular Surgery 2009; 137: 664-669 refers to primary hyperhidrosis rather than primary blushing.</p> <p>Canadian Journal of Physiology & Pharmacology 2008; 86: 700–9 refers to chemical sympathectomy of rats.</p>

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16	Consultee 1 NHS Professional	5	My biggest worry is safety and this happens when surgeons without formal thoracic surgery operate inside the chest. I have had a bleed which I had to open the chest quickly and the patient had an uneventful recovery. I have heard of a death which happened 100 miles south of Belfast. I understand that the surgeon had not had cardio thoracic surgical training. I believe that the majority of surgeons carrying out these operations in England are non cardio thoracic. The responses will therefore be weighed towards the safety of these procedures being done by non thoracic specialists.	Thank you for your comment.
17	Consultee 1 NHS Professional	6	The amount of ignorance by practitioners is staggering. many regard this an easy procedure. The level of ribs 2,3 and 4 are often wrongly transcribed as the levels of actual ganglia.	Thank you for your comment.
18	Consultee 2 NHS Professional Honorary Secretary, Vascular Society	6	Agreed	Thank you for your comment.

Com. no.	Consultee name and organisation	Sec. no.	Comments	Response
19	Consultee 3 Public	6	<p>And yet: No statistically significant association between the CS with age, family history, type of HH and extent of TS http://ejcts.oxfordjournals.org/content/34/3/514.full The main weakness of these studies was their lack of a comparison group and their resulting inability to exclude a placebo response to surgery. In addition, the methods of assessing outcome were poorly described and not validated, and the range of outcomes assessed was limited. The studies provided very limited evidence that sympathectomy improves blushing. Side effects were common. London: Bazian Ltd (Editors), Wessex Institute for Health Research and Development, University of Southampton 2003: 11 Wiley & Sons, Inc, news release, 2004 "Lifestyle" surgical procedure carries unrecognized risk of complications."Hoboken, NJ: John Wiley & Sons, Inc, British Journal of Surgery, Feb 5, 2004</p>	<p>Please respond to all comments</p> <p>Thank you for your comment.</p> <p>The web address refers to a study on hyperhidrosis rather than primary blushing (Rodriguez PM, Freixinet JL, Hussein M et al. [2008] Side effects, complications and outcome of thoracoscopic sympathectomy for palmar and axillary hyperhidrosis in 406 patients. European Journal of Cardio-Thoracic Surgery 34: 514-519)</p> <p>Appendix A includes Fischbacher C. Sympathectomy for facial blushing. In Bazian Ltd (ed) STEER: Succinct and Timely Evaluated Evidence Reviews 2003; 3(4). Wessex Institute for Health Research & Development. University of Southampton.</p> <p>The news release refers to Ojimba TA, Cameron AEP (2004) Drawbacks of endoscopic thoracic sympathectomy. British Journal of Surgery 91: 264–9, which does not describe primary blushing as an indication.</p>

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20	Consultee 1 NHS Professional	note	noone has big experience of this but my observation would be that it is difficult to base long-term results on good immediate results long-term good results as in hyperhidrosis. We are looking at different receptors of sympathetic innervation ie cholinergis rather that adrenergic in flushing and it seems some good early results fail more regularly than HH where the long-term appears to be good when the immediate results look good. case selection is crucial if patient who have flsuhung for several minutes are treated with ETS the results will be poor as with those who have areas of 'blotchiness'. All women who may be menopausal should be carefully assessed. It is thought that these three groups of patients may have flushing not based on the typical sympathetic discharge pattern. Ideaalay we should only operate on young patients who quickly develop a red 'roasted' appearance from the the sternal notch upwards and in whom the flushing disappears very quickly and completely.	Please respond to all comments Thank you for your comment. Section 1.5 of the guidance will be changed.

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