Endoscopic Thoracic Surgery (ETS) for Facial Blushing.

Facial Blushing occurs because of excessive blood flow to the skin. This usually occurs because of emotional stimuli. This causes reversible redness of the face. The neck and chest and upper arms can also be effected. Facial blushing can be treated by ETS. Many people feel the fear of facial blushing (erythrophobia) is "holding back their lives" ETS is a key hole operation performed through the rib cages on both sides by making usually 2 small cuts the size of 0.5cm. It can be very effective in treating the cause of acute facial or neck blushing by stopping the sympathetic nerve working and this most commonly is at the level of second (T2) and third thoracic(T3) bone. ETS is effective when facial blushing occurs to embarrasing or awkward situations and is associated with a social phobia where many patients avoid situations where they know they will blush such as meeting friends or even family, presentations or at work. Everyone will have their own story. This type of blushing usually last 10 minutes or so and the situations it occurs is often predictable. ETS however does not treat all forms of sudden redness such as when one is hot and flushed or exercising, has been out in the sun, drinking alcohol, certain foods, laughing or crying or feeling angry with stress. ETS is also unlikely to be succesful when the redness that lasts for hours. ETS does not treat facial redness to skin conditions such as Rosacea. ETS also does not change the baseline complexion of the face. So overall ETS can be effective in treating reversible facial blushing to awkward and embarrasing situations. Evidence reveals Endoscopic Thoracic Sympathectomy (ETS) in fully informed individuals improves the quality of life. For facial blushing studies have shown 85% are fully satisfied, 10-15% were to some degree dissatisfied and 2-4% of patients regretted the operation. ETS surgery is usually irreversible as the nerve does not re-grow although they can be potentially reversed in 20-30% of cases. No matter how ETS is performed it should not be undertaken thinking that it can be reversed sucessfully, as about 20-30% of cases can succesfully be done. ETS is not suitable in obese patients or those who have had lung disease, severe pneumonia in the past or lung or chest trauma.

It is usually advisable for most patients who blush and wish ETS to have either considered at least drug therapy or counselling/ cognitive behavioural therapy as analternative first line treatment. Some patients do not wish to try either but all should consider it. The decision to have ETS for facial blushing is made by the patient after consultation with the doctor when all the risks and benefits have been evaluated .

The aim of ETS is to reduce the frequency and duration of blushing by interupting the sympathetic chain which runs beside the vertebral column. ETS is performed under genral anaesthetic with 2 or 3 small incisions made close to the armpit. The lung is partially collapsed by inflating Carbon dioxide in the chest cavity. The sympathetic chin is visualized and usually divided by cutting standard, rarely clipping or burning the sympathetic chain may be performed although there are added risks and outcomes. The extent of the sympathectomy is most commonly over the T2 and T3 vertebra but T2 alone and rarely T2-T4 can be done and the level will be agreed with the surgeon. Both sides are treated together so as to avoid a Harlequin effect where only half the face does not blush when only one side is treated. On some very rare occasions it may technically not possible to perform ETS on both sides because of un-expected lung adhesions that was not known or predicted from the medical history provided at the original consultation. At the end of the operation the lung is re-expanded and the Carbon dioxide expelled. and the wounds closed with glue or sutures. A chest X ray usually confirms full lung expansion and on very rare occasions a chest drain or tube is required to help expand the lung. The vast majority of all patients are discharged following an overnight stay.

Results of ETS The outcomes of ETS can vary depending on the study used but but upto 85% had a satisfactory or lasting effect at 15 years. In some cases ETS does not work and in 1 study of 180 patients 2% of patients had recurrence at up to 1 year. Even in thise patients not, fully satisfied ETS can reduce the frequency, duration and intensity of the blush.

Side Effects and Complications of ETS

Despite improving the quality of life in up to 85% of patients about 4% of patients can regret ETS because of any of the unwanted side effects or complications. As a consequence of the sympathectomy, the face and hands almost stop producing any watery sweat even during exercise or hot days. This can leave the hands and face warm and dry. which may require moisturising cream. As a consequence to the dry hands and face, compensatory sweating can occur anywhere in the rest of the body such as abdomen back or lower limbs. The amount of compensatory sweating cannot be predicted on a case to case basis but is more likely to occur if patients excessively sweat in addition to blushing before surgery. Patients that only blush tend to have less severe compensatory sweating. Nevertheless assume between 2-11% of patients may find the sweating incapacitating and importantly whilst there may be some remedies such as light clothing, keeping the windows open, or turn the heating down there is no sick fix or permanent remedy and drug therapy, botox could be considered.

Gustatory sweating, which is sweating on the head or neck to smells or food can occur in uptown 30% of patients even if the the head and neck do not sweat to heat or exercise. Sometimes this may be rarely associated with facial pain.

A Horners syndrome which a slightly dropping eyelid and small pupil can occur with ETS in around 1-3% but this can be much less and depends on the surgical technique employed by the surgeon. In uptown 80%of these cases the Horners syndrome may resolve spontaneously but can also be permanent . Horners syndrome does not effect the eyesight, and the partial dropping of the eyelid can potentially be reversed by corrective eyelid surgery but not in all cases.

Bleeding or an air leak in the chest cavity can occur but is very rare and may require a chest tube or drain to treat this. This can delay discharge and on very rare occasions may require further surgery to resolve. Other very rare side effects are lung blood clots organ injury and nerve damage to the arm which can result in chronic pain and numbness to the upper limb or chest wall and rarely face have been reported.

Another rare side effect is a harlequin face where only half the side of the face has been successfully treated. This can occur in situations where there are severe unpredicted scar tissue inside the chest or if the surgeon cuts the nerve too low.

Whilst any of these side effects can occur the National Institute of Clinical Excellence has recognised that the care and technique of the surgeon may affect the efficacy and safety outcomes of this procedure.

As this information forms part of the consent process, If you do not understand any of this or require further specific explanation please contact the office by email enquiries@eblushing.com and phone on 0207 286 7274. Further information can also be achieved by visiting the NICE Website https://www.nice.org.uk/guidance/ipg480

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