Excessive sweating in the palms (palmar hyperhidrosis) is a common condition affecting about 1 to 4% of the population\(^1,2\). This condition affects both work and social life. Simple tasks such as handling paper can be a problem. Important social activities like shaking hands become embarrassing, and sufferers usually try to avoid such exchanges.

**Non-surgical treatment**

Unfortunately non-surgical means do not work very well. Non-surgical treatment includes:

1. Applying anhydrous solutions, such as aluminum chloride: effect only partial and temporary. Long term use might cause skin problem.
2. Anti-cholinergic drugs: decrease sweating generally, not specific to palms. Side effects common.
3. Iontophoresis: either does not work or effect partial and temporary only.
4. Botox injections: effective, but injection is very painful in the palms. Effect only lasts for 3 to 4 months and repeated injections are required\(^3\).

**Surgical treatment**

The operation of thoracic sympathectomy can offer permanent dryness of the palms. However, in the past, sympathectomy has not been popular because the open approach is a relatively major procedure, and carries significant operative risks such as injury to the brachial plexus, stellate ganglion and the lung\(^4,5,6\). The size and risks of open surgery are high for a relatively “benign” condition. Not surprisingly, physicians were reluctant to refer their patients for surgery. Now this surgery can be performed via a minimally invasive approach with minimal risk\(^7,8,9\).

Thoracoscopic sympathectomy or endoscopic thoracic sympathectomy employs a telescope which provides a clear view. There are usually two or three small wounds which are virtually painless (figs. 1 and 2).

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**Fig. 1** Three small wounds 2mm to 3mm are used for thoracoscopic sympathectomy.

**Fig. 2** The wounds after surgery. A small catheter is used to suck out all the air at end of the operation so that chest drain is not required.
At thoracoscopy, the sympathetic chain can be identified clearly, and the sympathetic chain is divided or partially removed (figs. 3 and 4).

Recent evidence shows that the highest success rate is achieved if sympathetic chain is divided at top of the 3rd rib \(^9\,^{10}\). The success rate, that is the hands become dry post-operatively, is near 100\% (Fig. 5) \(^7\,^9\,^{11}\).

The most common complication is compensatory sweating (CS) which can occur in 60-70\% of the patients \(^12\). Most cases of CS are mild and only about 5 to 10\% are severe \(^13\,^{14}\). Limiting the extent of sympathectomy may lessens the incidence of compensatory sweating.

Because of the clear view from thoracoscopy, damage to the stellate ganglion is avoided, and therefore Horner’s Syndrome (drooping of the eyelid, pinpoint pupil and absence of sweating on the face) is rarely seen with the thoracoscopic technique \(^7\,^8\). There has not been a case of Horner’s in the author’s series of nearly 300 sympathectomies (personal data).

Other operative complications include bleeding and injury to the lung, which occur uncommonly in the experienced hands \(^11\,^{14}\).

The operation can often be performed as day surgery \(^15\,^{16}\,^{17}\).
Conclusion

Modern thoracosopic sympathectomy for palmar hyperhidrosis is highly effective with nearly 100% success rate. The operative risks are low and post-operative complications are usually minor. The wounds are very small and cosmeses are excellent. It is highly recommended for persons with disturbing sweaty palms.

References


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