

## Activities and effects of a qualification system for elastic compression stocking appliers of the Japanese Society of Phlebology

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### Abstract

The Japanese Society of Phlebology established a qualification system for elastic stocking conductors to promote proper usage of elastic compression stocking (ECS) and bandages for the treatment and prevention of venous disease, and also treatment of lymphatic disease in 2002. One hundred fourteen half day hands-on seminars were held all over Japan with assistance of manufactures and distributors of ECS and bandages. The number of attendees, mainly nurses, was more than 11,000(!) and 2384 ESC conductors certificates were issued after certain clinical experiences. ESC conductors are currently working in the outpatient clinics for treatment of venous and lymphatic edema and on inpatients wards for prevention VTE. ECS experts with good knowledge of ECS and diseases increase the compliance of ECS by meticulous consultation of the patients regarding compression therapy.

### Introduction

Not many medical staff members have sufficient knowledge about compression stockings or bandages. Even if they know they do not have enough time to educate and consult patients regarding compression therapy. By increasing the number of medical professionals with knowledge of compression therapy we try to increase patients' compliance.

The educational program of the Japanese Society of Phlebology (JSP) to promote proper usage of elastic compression stockings (ECS) and bandages for treatment and prevention of venous disease, and also treatment of lymphatic disease was established by Professor Masafumi Hirai in 2002. Then, a Japanese guideline for VTE prophylaxis was published in 2004, and

revised in 2009. Reimbursement for prevention of pulmonary embolism prophylaxis was started in 2004. It is 305 points = approximately 30 Euro and is applied only for high-risk VTE in-hospital patients who were controlled under ECS, elastic bandages or IPC in accordance with the guideline. Perioperative pulmonary thromboembolism in Japan decreased to half after 2004, based on the results of perioperative pulmonary thromboembolism research by the Japanese Society of Anesthesiologists (JSA-PTE research), mainly after introduction of ECS, elastic bandage or IPC but not of anticoagulants.<sup>1</sup> Management fee of secondary lymphedema was also reimbursed in 2008. It is up to approximately 300 Euro per half year.

A ESC conductor is qualified after attendance of ESC conductor seminar, *i.e.* half-day hands-on seminars, and documentation of 30 cases of clinical experience reports by JSP. ESC conductor seminars are half-day course with 100-300 attendees. Eight seminars per year are held all around Japan more than 140 times. The JSP published an official textbook for ESC conductor seminar which covers venous anatomy, physiology, venous disease, prevention of deep vein thrombosis, pulmonary embolism, lymphedema, and includes theory and practical usage of ESC/bandage.<sup>2</sup> The lectures are based on the textbook. After the lecture, hands-on seminars of ECS & bandages with video viewing lasts about one and half hours. Several methods of application of ECS, elastic bandage and ECS donor are practiced with sub-bandage pressure measurement. Seminars are operated under independent financial conditions. Class fee; approx. 50-80 Euro per attendee and exhibition fee from stocking company: 300-500 Euro per company are the main source of income. Currently, the number of attendees, mainly nurses, is more than 11000 and the number of qualified ECS conductors exceed 2384 by 2016. About 250 ECS conductors are qualified every year.

ESC conductors are currently working in the outpatient clinic for treatment of venous and lymphedema and inpatients ward for prevention VTE. ECS conductors with good knowledge of ECS and diseases increase the compliance of ECS by meticulous consultation on compression therapy.

### Case Reports

Case of increased compliance of compression therapy by meticulous consulta-

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tions by ECS conductor.

Eighty years old female was presented with refractory venous leg ulcer (VLU) due to immobilization and knee/ hip arthroplasty (Figure 1). No DVT or varicose vein was detected. It was difficult for her to reach her leg because she could not bend over. Leg elevation was instructed. Compression therapy with pressure guide medium stretch bandage (30 mmHg) was started. Compression bandage was changed to pressure guide low stretch bandage (45 mmHg) because of no healing of VLU. She started to complain of itching and finally rejected compression therapy. VLU worsened after three months (Figure 1). ECS conductor (outpatient nurse) consulted her meticulously and found the reason of poor compliance of compression therapy and poor hygiene. She was living alone and depressed. A visiting nurse was introduced and her son living abroad was informed about his mother's condition. Compression therapy was restarted with pressure guided cotton stretch bandage (30 mmHg) and the pressure was increased up to 45 mmHg. Compliance was kept well with help of visiting nurses and encouragement of her son. VLU was healed five months after presentation and she was kept on ECS (20 mmHg) without recurrence (Figure 1).

### Conclusions

ECS conductors with good knowledge of ECS and bandages and diseases help to increase the compliance regarding compression therapy by meticulous consultation.



Figure 1. Case reports.

## References

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