



THUASNE

Effect of thoracolumbar braces in treating osteoporotic vertebral compression fractures



EFFECT OF A SEMIRIGID THORACOLUMBAR ORTHOSIS on gait and sagittal alignment in patients with an Osteoporotic Vertebral Compression Fracture (OVCF). Eva Jacobs et al. 2019



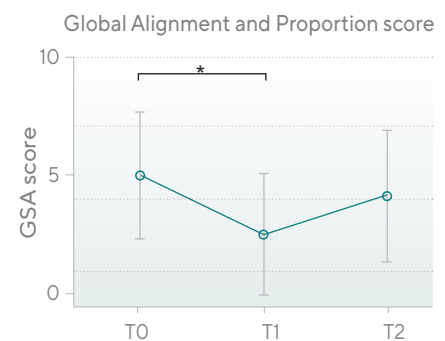
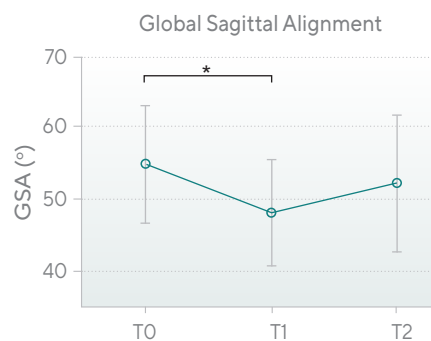
Fifteen postmenopausal patients with an OVCF were treated with a semirigid thoracolumbar orthosis for 6 weeks.



Gait analysis was performed with a dual belt-instrumented treadmill providing a virtual environment combined with clinical and radiographic assessments.

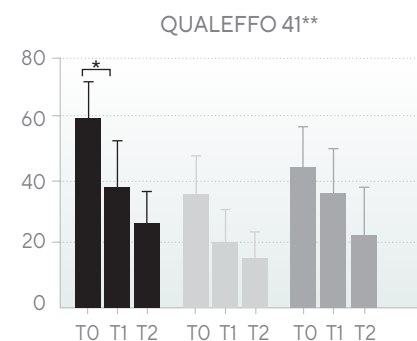
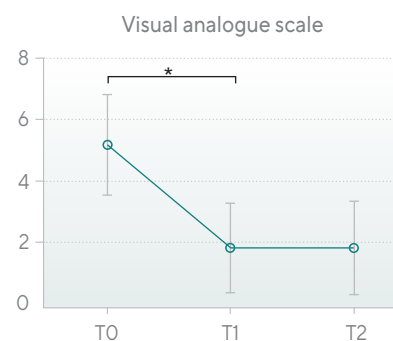
Radiographic assessment

Patients demonstrated an improvement in static sagittal alignment with respect to baseline, determined by significantly decreased GSA and GAP score.



Quality-of-life assessment

Patients reported less pain and improved quality of life 6 weeks after fracture, showing decreased pain on the visual analogue scale (68%), QUALEFFO** 41 pain (38%), physical function (42%), social function (21%), and general health (16%) scores.



T0: at baseline, T1: After 6 weeks, T2: After 6 months;
*P<0.001= significant; **Quality of Life Questionnaire of the European Foundation for Osteoporosis.

■ Pain ■ Physical function ■ Social function

CONCLUSION

A semirigid thoracolumbar orthosis seems to have a positive effect on gait and stability in patients suffering from an OVCF, as was shown by a more upright posture, which may result in decreased compressive loading of the vertebrae.

NON-SURGICAL MANAGEMENT of acute osteoporotic vertebral compression fracture: a review. Bhavuk G et al. 2017

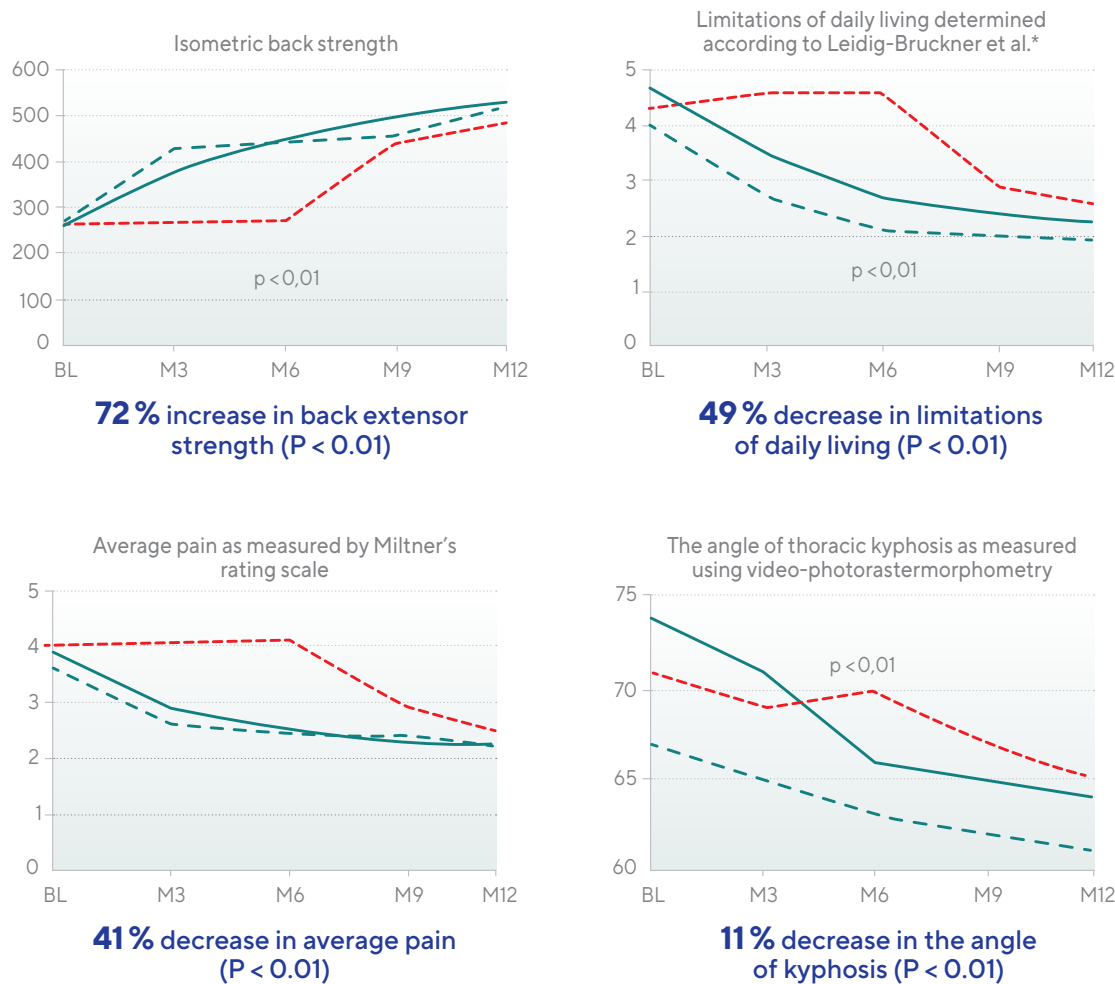
BRACING

The use of bracing can be an initial step in the management of patients with osteoporotic compression vertebral fracture. Bracing can be helpful in pain reduction from movement by stabilizing the spine. Bracing also reduced back fatigue which helps patients in an early mobilization. Therefore, **bracing is mandatory during the initial 6-8 weeks for pain relief.**

EFFECTS OF TWO NEWLY DEVELOPED SPINAL ORTHOSES

on trunk muscle strength, posture, and quality-of-life in women with postmenopausal osteoporosis: a randomized trial.

Pfeifer M, et al. 2011



— bracing groups — Control group

*Leigid-Bruckner G, Minne HW, Schlaich C, et al: Quality of life components and spinal deformity in women with chronic low back pain and women with vertebral osteoporosis. J Bone Miner Res 1997;12: 663Y75

CONCLUSION

The use of an **orthosis increases trunk muscle strength** and therefore improves posture in patients with vertebral fractures caused by osteoporosis. In addition, a **better quality-of-life** is achieved by pain reduction, decreased limitations of daily living, and improved well-being. Thereby, the use of an **orthosis may represent an efficacious nonpharmacologic treatment option for spinal osteoporosis.**

CONCLUSION

Osteoporotic vertebral fractures affect quality of life. Unfortunately to date, current understanding and knowledge for osteoporotic VCF are inconclusive.

However, this review **highlighted all the relevant non operative methods in the management of osteoporotic vertebral fractures.**

Treatment decisions should focus on improvement of quality of life of the patient, risk-benefit ratio and cost-effectiveness as well.

Medical indications



LombaStab dorso

Non specific low back pain (acute, subacute, chronic phases), stable vertebral fracture, Scheuermann's disease, static disorders (kyphosis or lordosis)

Size	Waist size
Size 1	60 - 80 cm
Size 2	75 - 95 cm
Size 3	90 - 110 cm
Size 4	105 - 125 cm
Size 5	120 - 140 cm



SLEEQ MAX™

Moderate to severe sagittal and coronal transverse plane motion restriction; stable vertebral fracture; increased intracavitary pressure to reduce spine and disc loading; mechanical or discogenic thoracic lumbar and extremity pain; post-operative spinal stabilization; fusion; degenerative disc disease; post-injury to facilitate healing; spondylolysis; spinal stenosis; spondylolisthesis; spondylosis, laminectomy; discectomy; facet syndrome; spinal muscle weakness; arthritis; low back sprains, strains and prophylactic back support.

Size	Waist size
Unique size	65 - 136 cm
extension panel	136 - 157 cm



Osteomed Acute

Osteoporosis
Vertebral osteoporotic fractures
Hyperkyphosis of the thoracic spine (Hunchbacks)
Palliative therapy

Size	Waist size
Unique size	70 - 140 cm



Sleeq Flex

Stable, osteoporotic vertebral body fractures
Hyperkyphosis of the thoracic spine (Hunchbacks)
Spondylitis
Bechterew's disease

Size	Waist size
Unique size	65 - 136 cm
extension panel	136 - 157 cm

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