

M.4[®]s OA comfort

4-point knee orthosis for varus or valgus pressure relief and stabilisation



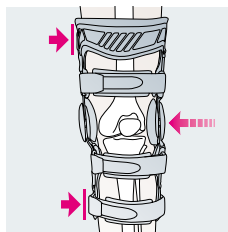
Indications

- severe medial or lateral gonarthrosis (at least level III) combined with ligament instability
- unicompartmental relief before HTO (brace test)
- for relief of painful stress fractures (e.g. tibiahead)
- cartilage surgery / chondroplasty / meniscus refixation with required postoperative relief of the medial or lateral compartment
- strong overloading of the medial or lateral compartment
- permanent relief, where surgery is contra-indicated

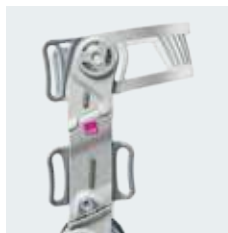
Mode of action

- relief of the lateral or medial compartment using the 3-point principle
- pain relief by reducing weight-bearing on the affected side of the joint
- optimal stabilisation using 4-point principle
- safe collateral stabilisation by rigid frame
- extension and flexion limitation protects against damaging joint movements and relieves injured structures
- limitations:
 - extension: 0°, 10°, 20°, 30°, 45°
 - flexion: 0°, 10°, 20°, 30°, 45°, 60°, 75°, 90°
 - immobilisation: 0°, 10°, 20°, 30°, 45°

Product benefits



3-point principle for guaranteed protection.



Movable thigh clamp for a perfect contact and positioning on the leg.



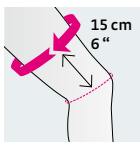
Double-layer condylar padding cover to increase comfort and reduce pressure friction.



Ultra-flat and lightweight frame and hinge construction.

Anatomically preformed and torsion-resistant frame geometry

grey / graphit



circumference thigh (cm)	31 – 37	37 – 45	45 – 51	51 – 57	57 – 65	65 – 74
size	XS	S	M	L	XL	XXL
article number	G.52□.◇01	G.52□.◇02	G.52□.◇03	G.52□.◇04	G.52□.◇05	G.52□.◇06

□ = fill in for variant: 7 = Varus, 8 = Valgus / ◇ = fill in for orientation: 2 = left, 3 = right

CASE REPORT: FEMORAL AND TIBIAL STRESS REACTION IN RECREATIONAL ATHLETES. IS THERE A GOLDEN STANDARD FOR THE MEDICAL TREATMENT?

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AIM:

The purpose of this observational study was to investigate the frequency of stress reactions of the tibia in sports. In our department different orthopaedic surgeons reported an increasing number of stress reactions of the tibiaplateau in recreational athletes. There are some case reports concerning this diagnosis in athletes in literature. Nevertheless there is no golden standard for the medical treatment.

MATERIALS AND METHODS:

31 patients (9 female, 22male) with a diagnosis of stress reaction of the tibia were seen in our orthopaedic department between May 2008 and September 2009. There were no varus or valgus deformity. All athletes had increased the intensity of their training a few weeks before their stress injury. There were no advices for a stress reaction in x-ray, but it could be detected in MRI examinations in all cases. All patients underwent conservative treatment without extra medicamentous therapy. Dependent on localisation of the stress injury an elimination in sports, magnetic field therapy, physiotherapy and non-weight bearing conditioned by pain were exhibited in all athletes. 15 patients got a leg brace (varus/valgus) in addition to their non-weight bearing. Weekly follow-ups and an increase of load dependent upon the clinical findings have been carried out.

RESULTS:

The average of the medical treatment until full weight bearing was 4,8 weeks for the athletes with leg brace and 6,2 weeks for the other 16 patients. Similar to these findings the pain conditioned non-weight bearing was shorter for the patients with orthosis.

DISCUSSION AND CONCLUSIONS:

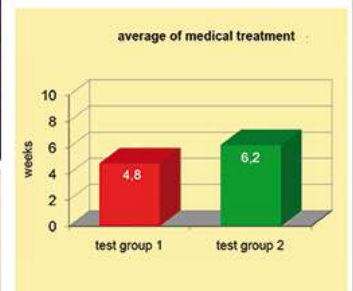
Stress reactions are relatively common overuse injuries seen in recreational athletes, particularly in running athletes. The group with leg brace showed earlier pain conditioned full weight bearing in contrast to the control group without orthosis. By this means a faster mobilisation could be carried out. Furthermore athletes treated with a leg brace are able to take part in their competition or athleticism significant earlier than others. It is very difficult to define a golden standard regarding the variations of stress reactions and the patient compliance. MRI examination has emerged as a highly sensitive method for detecting stress reactions of bone. We would suggest in patients with unicondylar stress reactions with the above considered medical treatment a valg./var. orthosis. After returning to full weight bearing patients should undergo gait analysis to detect gait depending unicondylar overload of the tibial plateau.

Regarding all the cases in our orthopedic department it seems to be a very important fact that a lot of recreational athletes misjudge their training intensity and scale.

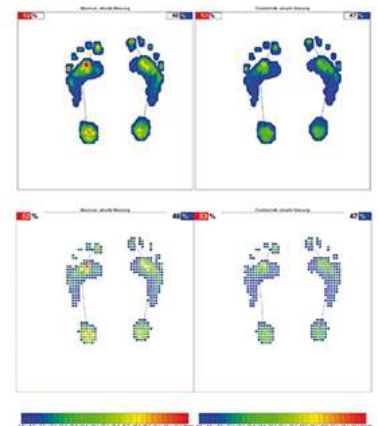


method, therapy, result

test group 1	test group 2
relief	relief
magnetic field therapy	magnetic field therapy
physiotherapy	physiotherapy
Elimination in sports	Elimination in sports
orthosis	



functional analysis under full weight bearing



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