Effects of Topical Diclofenac Plus Heparin (Dhep+H Plaster) on Somatic Pain Sensitivity in Healthy Subjects With a Latent Algogenic Condition of the Lower Limb

Abstracts
Key Take-Away:

Benefits for Diclofenac plus Heparin (plaster treatment especially on the thigh) was drawn from this original article as compared to diclofenac alone. This treatment provides a rational outcome for the algogenic condition of the lower limb.

To evaluate whether a diclofenac epolamine + heparin topical (plaster) is more effective than diclofenac plaster alone in reducing deep somatic hyperalgesia in subjects without spontaneous pain and whether the effect is linked to or independent of the anti-edematous action of heparin.

ABSTRACT:
Background:

To evaluate whether a diclofenac epolamine + heparin topical (plaster) is more effective than diclofenac plaster alone in reducing deep somatic hyperalgesia in subjects without spontaneous pain and whether the effect is linked to or independent of the anti-edematous action of heparin.

Methods:

Prospective, double-blind, randomized and controlled, four-arm parallel design trial. One hundred and four patients (84 women, 20 men, mean age 42.2 ± 13.3 years), with deep somatic hyperalgesia in one thigh, randomly assigned to one of 4 groups of 26 each.

Each group underwent one of the following plaster treatments on one thigh: diclofenac+heparin; diclofenac; heparin; placebo, for 7 days, renewing the plaster every 24 hours. Before treatment (day 1), at day 4 and day 8, assessment of (a) pressure and electrical pain thresholds of vastus lateralis and overlying subcutis and skin; and (b) structure/thickness of subcutis and muscle with ultrasounds at the same level.

Results:

During treatment, in placebo and heparin, no significant threshold changes, except subcutis thresholds which increased slightly (P < 0.02); in diclofenac and diclofenac + heparin, significant increase in all thresholds (0.0001 < P < 0.04).

Electrical muscle pain thresholds increased significantly more in diclofenac+heparin than in diclofenac, heparin, and placebo (0.0001 < P < 0.04). In all groups: no edema and thickness changes at ultrasounds in muscle and subcutis.

Conclusion:
Topical diclofenac + heparin is significantly more effective than diclofenac alone in reducing muscle hyperalgesia in subjects without spontaneous pain, independently of the anti-edematous action of heparin.

The results provide a rationale for the use of diclofenac + heparin also in algogenic conditions without evident signs of injury/edema/hematoma.

**Expand section**