

Linalyl Acetate

Neuropathic pain is a debilitating chronic disorder, significantly causing personal and social burdens, in which activated neuroinflammation is one major contributor. Thymic stromal lymphopoietin (TSLP) and interleukin (IL)-33 is important for chronic inflammation. Linalyl acetate (LA) is main component of lavender oil with an anti-inflammatory property through TSLP signaling. The aim of the study is to investigate how LA regulates mechanical hyperalgesia after sciatic nerve injury (SNI). Adult Sprague-Dawley male rats were separated into 3 groups: control group, SNI group and SNI with LA group. LA was administrated intraperitoneally one day before SNI. Pain behavior test was evaluated through calibration forceps testing. Ipsilateral sciatic nerves (SNs), dorsal root ganglions (DRGs) and spinal cord were collected for immunofluorescence staining and Western blotting analyses. SNI rats were more sensitive to hyperalgesia response to mechanical stimulus since operation, which was accompanied by spinal cord glial cells reactions and DRG neuro-glial interaction. LA could relieve the pain sensation, proinflammatory cytokines and decrease the expression of TSLP/TSLPR complex. Also, LA could reduce inflammation through reducing IL-33 signaling. This study is the first to indicate that LA can modulate pain through TSLP/TSLPR and IL-33 signaling after nerve injury ¹⁾

¹⁾

Lu YY, Lu CC, Huang CL, Tsai HP, Wang WT, Zhang ZH, Wu CH. Article Type: Original Article Title: Linalyl Acetate Ameliorates Mechanical Hyperalgesia Through Suppressing Inflammation by TSLP/IL-33 Signaling. Neurochem Res. 2022 Oct 26. doi: 10.1007/s11064-022-03763-1. Epub ahead of print. PMID: 36287299.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=linalyl_acetate

Last update: **2024/06/07 02:51**

