

A double-blind, randomized study of the effect of Japanese White Turmeric (JWT) on symptoms of osteoarthritis of the knee and/or hip.

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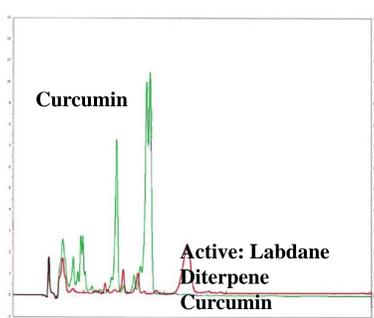
RATIONALE

Curcumin has proven anti-inflammatory effects
 Curcumin has been tested in osteo-arthritis several times without convincing effects
 Di-terpenes have show promising effects in animal experiments
 Japanese white turmeric is chemically very different from the curcumin preparations
 Both preparations are well known spices in Japan
 We need an alternative to the conventional treatment with paracetamol and NSAIDs due to the side-effects and adaptation
 If a dietary factor could prove beneficial for the patients it would be a favourable contribution to the treatment
 However: Meta-analysis indicate that in osteo-arthritis placebo is effective in reducing pain, stiffness and ADL in about 50% of patients.

METHODS

120 patients (3 sites) with diagnosed osteoarthritis in the knee and/or hip and a regular consumption of rescue medicine
 Recruited by various methods (out-patients – announcement in papers) – None “qualified” for surgery.
 Placebo- controlled, double blind, parallel design
 Above 40 years of age with pain score: At least 3 on a scale from 0-10
 Duration of the disease: At least 6 month
 12.8 mg JWT x 1 for up to 6 months (or placebo)
 WOMAC questionnaires at baseline and after 1,2,3 and 6 months
 Daily registration of intake of rescue medicine
 All patients were urged to use as little rescue medicine as possible

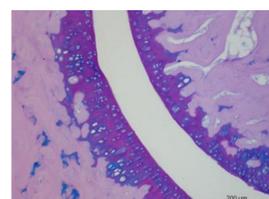
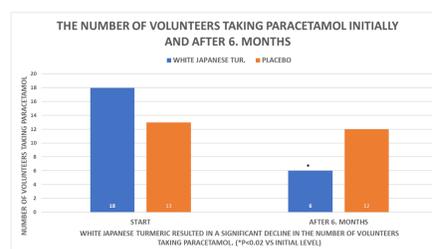
Difference of chemicals contained in Yellow Turmeric and Japanese White Turmeric (HPLC data)



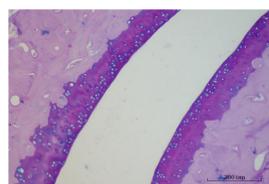
Green-Yellow turmeric
 Red-Japanese white turmeric

RESULTS

Reduction of pain-score (numerical scale) after 3 (p<0.0003) and 6 months (p<0.04) (Womac Scale)
 Physical function (ADL) improved after 6 months (p<0.03)
 Stiffness improved after 3 and 6 months
 Global score for severity of disease (PGAD) improved after 3 and 6 months
 Use of rescue medication reduced by more than 60% after 3 months (p<0.001), both paracetamol and NSAIDs
 Side-effects were minor and without difference between the groups

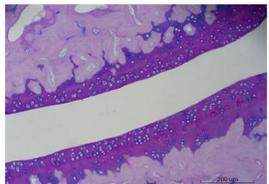


AB-PAS Staining



RATS

Normal cells



inflamed cells

Post white turmeric

The content of the capsules tastes like a mixture of black pepper and cayenne pepper

CONCLUSIONS

JWT alleviated the symptoms of osteo-arthritis significantly

JWT decreased the need for medications (paracetamol and NSAID) significantly

The effects were present after 3 months of treatment

No side effects

