

Crenobalneotherapy in fibromyalgia, a systematic review

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The purpose of the study is to find and summarize the best evidence for crenobalneotherapy in fibromyalgia syndrome.

Method

Bibliographic analysis. Performed by 3 reviewers (FBF, AD, ND), on multiple databases with keywords: “Fibromyalgia” AND “spa” OR “balneotherapy” OR “hydrotherapy” OR “mud” OR “peloid” OR “bath” OR “pool” OR “thalassotherapy” OR “mineral water” OR “hot bath” OR “aquatic” OR “thermal water”.

Inclusion criteria were: comparative studies evaluating interventions of 1 to 6 weeks, diagnostic of fibromyalgia with 1990 ACR classification criteria, trials performed after 1990, No restriction in length of follow up, studies in English, French, and Turkish.

Methodological analysis. Internal validity is estimated by CLEAR NTP (10 items): evaluating selection bias, performance bias, detection bias & attrition bias. External validity & Statistical validity is estimated by personal checklists. We also performed an empirical analysis of publication bias by the graphical test proposed by Sutton (Sutton BMJ 2012)

Results

We found 15 trial (16 articles) representing 787 patients. There are probably unpublished negative results and heterogeneity between trials. Four of the studies have median risk of bias: Donmez 2005 (n=30), Ozkurt 2010 (n=50), De Andrade 2008 (n=46), Zijlstra 2005 & 2007 (n=132) but only one have enough statistical power. Eleven others have high risk of bias.

Synthesis

With a median risk of bias (major difference in lost to follow up in group & per protocol analysis) Zijlstra & al. found a better improvement lasting 3 months in the treatment group for SF 36, FIQ and many other outcome measures. The treatment combines aerobic exercises, thalassotherapy, patient education program and recreational activities. The clinical improvement is associated with limited incremental cost of 1311€/patient.

With a good internal validity but a poor external & statistical validity, the study of Donmez & al. comparing hot mineral water bath and waiting list. Statistical power is sufficient to detect an improvement in FIQ, pain (VAS), tender point count, patient global evaluation & fatigue.

With a good internal validity but a poor external & statistical validity, the study of Ozkurt et al. had a sufficient statistical power to detect an improvement with time in the balneotherapy group and not in the control group. But lack of intergroup comparison prevents any conclusion.