Clinical outcomes, histopathological patterns, and chemical analysis of Ayurveda and herbal medicine associated with severe liver injury—A single-center experience from southern India

Cyriac Abby Philips, Rajaguru Paramaguru, Adarsh K. Joy, K. L. Antony and Philip Augustine

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Abstract

Introduction

Ayurvedic and herbal medicines (AHM) are known to cause varying degrees of drug-induced liver injury (DILI). Clinical, biochemical, histological spectrum and outcomes of AHM linked to severe DILI are not well studied.

Methods

Out of 1440 liver disease patients, 94 were found to have a severe liver injury and associated AHM intake. Thirty-three patients were suspected to have AHM-DILI on Roussel Uclaf Causality Assessment Scoring Method. Forty-seven and 30 of retrieved AHM samples were analyzed for heavy metals and hepatotoxic volatile organic compounds (hVOCs), respectively. Eleven patients ingested AHM from unregistered traditional healers (UTH). Clinicopathological outcomes were analyzed in 27 patients (who underwent liver biopsy) and outcomes with respect to chemical analyses were studied in 33 patients.

Results

Males predominated (70.4%) with mean age 46.9±15.8 years. Mean follow up was 119.2±81.4 days. The median duration of drug intake was 28 days (10 – 84). Five patients died (18.5%). Hepatic encephalopathy, hypoalbuminemia, and hepatic necrosis were significantly associated with mortality ($p < 0.005$). Arsenic and mercury ingestion was significantly associated with death ($p < 0.005$). hVOCs were detected in more than 70% of samples. AHM intake from UTH was associated with higher mortality.

Conclusion

Adequate regulation and scrutiny regarding AHM use among the general population is an unmet need. Early liver biopsy after clinical identification of at-risk patients can expedite definitive treatment with a liver transplant.

Combination of Ayurveda and Yoga therapy reduces pain intensity and improves quality of life in patients with migraine headache

Vasudha M. Sharma ,N.K. Manjunath, H.R. Nagendra, Csaba Ertsey

Complementary Therapies in Clinical Practice, Volume 32, August 2018, Pages 85–91

Abstract

Objectives

To Understand the efficacy of Ayurveda and Yoga in the management of Migraine Headache.

Methods

30 subjects recruited to Ayurveda and Yoga (AY) group underwent traditional *Panchakarma* (Bio-purificatory process) using therapeutic Purgation followed by Yoga therapy, while 30 subjects of Control (CT) group continued on symptomatic treatment (NSAID's) for 90 days. Body constitution questionnaire was administered to both groups. The outcome measures included Symptom check list,

Comprehensive Headache related Quality of Life Questionnaire and Visual Analogue Scale.

Results

Forty-six (76.6%) out of 60 subjects belonging to both groups had *Pitta* based body constitution. Following 90 days of intervention the AY group showed significant reduction in Migraine symptoms including pain intensity (p/ </ .001) and improvement in Headache related Quality of Life (p/ </ .001). The CT group showed no significant change (p/ >/ .05).

Conclusion

Traditional Ayurveda along with Yoga therapy reduces symptoms, intensity of pain and improves Quality of life in Migraine patients.

Effectiveness of an Ayurveda treatment approach in knee osteoarthritis – a randomized controlled trial

C.S.Kessler, K.S.Dhiman, A.Kumar,T.Ostermann, S.Gupta, A.Morandi, M.Mittwede,E.Stapelfeldt, M.Spoo, K.Icke,A.Michalsen,C.M.Witt

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Summary

Objective

Ayurveda is commonly used in South Asia to treat knee *osteoarthritis* (OA). We aimed to evaluate the effectiveness of Ayurvedic treatment compared to conventional conservative care in patients with knee OA.

Method

According to American College of Rheumatology (ACR) criteria knee OA patients were included in a multicenter randomized, controlled, *open-label trial* and treated in 2 hospital clinics and 2 private outpatient clinics in Germany. Participants received either a multi-modal Ayurvedic treatment or multi-modal conventional care with 15 treatments over 12 weeks respectively. Primary outcome was the change on the Western Ontario and McMaster University Osteoarthritis (WOMAC) Index after 12 weeks. Secondary outcomes included WOMAC subscales; the pain disability index and a pain experience scale, numeric rating scales for pain and sleep quality, quality-of-life and mood, rescue medication use, and safety issues.

Results

One hundred fifty-one participants (Ayurveda n = 77, conventional care n = 74) were included. Changes of the WOMAC Index from baseline to 12 weeks were more pronounced in the Ayurveda group (mean difference 61.0 [95%CI: 52.4;69.6]) than in the conventional group (32.0 [95%CI: 21.4;42.6]) resulting in a significant between-group difference ($p < 0.001$) and a clinically relevant effect size (Cohen's d 0.68 [95% CI:0.35;1.01]). Similar trends were observed for all secondary outcomes at week 12. Effects were sustained at follow-ups after 6 and 12 months.

Conclusion

Results suggest that Ayurvedic treatment is beneficial in reducing knee OA symptoms. Further studies should be conducted to confirm the magnitude of the effect and to clarify the role of different treatment components and non-specific effects.

Combined Ayurveda and Yoga Practices for Newly Diagnosed Type 2 Diabetes Mellitus: A Controlled Trial

Datey P. · Hankey A. · Nagendra H.R.

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Summary

Background: The increasing prevalence of type 2 diabetes in India is a cause for national concern, particularly the spiraling cost burden to the country. As one approach to stop its increase, Yoga medicine has been widely implemented, finding popularity with all social strata. Here, we report a study suggesting that treatment with fresh herbal juices and Yoga can improve the levels of blood glucose and hemoglobin A1c (HbA1c) in people with pre-diabetes. ***Methods:*** Study design: 3-arm controlled trial 3 months in duration. Participants: 157 male prisoners with newly diagnosed, high fasting blood sugar (FBS) and postprandial blood sugar (PPBS) levels. Group interventions: (1) Rasahara and Yoga, (2) Yoga, (3) no intervention. Assessments: FBS and PPBS levels were measured every 2 weeks; HbA1c and blood lipids were determined pre- and post-intervention. ***Results:*** Significant decreases occurred in the FBS (-21.13 ± 21.16 mg/dl) and PPBS levels (-15.02 ± 14.89 mg/dl) in group 1 (both $p < 0.0001$) and in the FBS level (20.62 ± 32.68 mg/dl) in group 2 ($p = 0.0005$), while the increases in group 3 attained significance only for the PPBS level (9.62 ± 21.83 mg/dl) ($p = 0.0022$). Observed changes in HbA1c were: group 1, -0.044 ± 0.059 mg/dl; group 2, +0.024 ± 0.456 mg/dl (not significant); and group 3, +0.365 ± 0.369 mg/dl ($p < 0.0001$). ***Conclusions:*** This study of Yoga for the treatment of diabetes shows that all male prisoners could benefit from the Yoga prison programs. Addition of Yoga programs to state and federal activities at all levels is now national policy in India. Follow-up studies should be carried out to obtain more robust results.

Vegetarian Diet and Cardiometabolic Risk among Asian Indians in the United States

Ranjita Misra, Padmini Balagopal, Sudha Raj, and Thakor G. Patel

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Abstract

Research studies have shown that plant-based diets confer cardiovascular and metabolic health benefits. Asian Indians (AIs) in the US (who have often followed plant-based diets) have elevated risk for chronic diseases such as diabetes, metabolic syndrome, and obesity suggesting ethnic vulnerability that imply genetic and/or lifestyle causative links. This study explored the association between this ethnic group and diabetes, obesity, and metabolic syndrome after controlling for demographics, acculturation, family history of diabetes, and lifestyle and clinical risk factors. The sample comprised of 1038 randomly selected adult AIs in seven US sites. Prevalence and metabolic syndrome was estimated, and obesity was calculated using the WHO Asian criteria. Multivariate analysis included multinomial logistic regression. The mean age and length of residency in the US were 47 and 18.5 years, respectively. The majority of respondents were vegetarians (62%) and educated. A vegetarian lifestyle was associated with females, food label users, respondents with poor/fair current health status, less acculturated, and those who reported their diet had not changed after coming to the US. Vegetarian status was a protective factor and lowered the risk for diabetes but not for metabolic syndrome and obesity in the regression model. Results provide a firm basis for educational programs.