CUPPING FOR PATIENTS WITH INFLAMMATORY COMPLAINTS – CLINICAL AND BIOCHEMICAL OUTCOMES

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BACKGROUND TO STUDY

- 2005 – Pilot study on cupping therapy published.
- 6 patients received cupping therapy for musculoskeletal conditions.
- Cupping therapy was given every other day over 2 weeks.
- Blood analysis was performed before treatment, after one week of treatment and at the end of treatment.

BACKGROUND TO STUDY

- All cellular parameters were normal.
- Significant changes (reduction) were only seen in the Erythrocyte Sedimentation Rate (ESR).
- ESR is a broad indicator of inflammation suggesting cupping therapy has an anti-inflammatory action.
- The current study aims to identify those biochemical changes that contributed to the observed reduction in ESR.

SUBJECT RECRUITMENT

- 14 patients presenting with a range of musculoskeletal conditions.
- Exclusion criteria:
  - acute illness when recruited
  - anaemia or other blood disorder
  - pregnancy or trying to conceive
  - other known severe illness
  - no acupuncture/cupping treatment for 6 months.
- If taking medication dose must be stable for three months prior to study.

METHODOLOGY

- TCM diagnosis was performed on all patients.
- Appropriate cupping therapy was given weekly over 6 weeks.
- Blood samples were taken pre-, during, at end and 6 weeks post treatment.
- At each treatment session, patients completed a MYMOP questionnaire.

METHODOLOGY

- MYMOP questionnaire assessed main complaint, secondary complaint, activity and wellbeing.

- Week 1: Initial diagnosis/MYMOP/Treatment 1/Pre-treatment blood sample
- Week 2: MYMOP/Treatment 2
- Week 3: MYMOP/Treatment 3/Blood sample after treatment
- Week 4: MYMOP/Treatment 4
- Week 5: MYMOP/Treatment 5
- Week 6: MYMOP/Treatment 6/ Blood sample after treatment
- 6 weeks later: MYMOP/Blood sample

RESULTS

- Patients:
  9 females (23 – 52 years)
  5 males (37 – 62 years)
- Range of chronic conditions affecting neck, shoulder, upper/lower back, hip, knees, ankles, feet.
- Duration of conditions: 8 months – 30 years.
- One patient withdrew from the study.

RESULTS

- TCM Diagnoses:
  Empty (Blood & Yin Xu); Mixed (Bi Syndrome with Stagnation or underlying Deficiency); Full (Blood & Qi Stasis)
- Cupping Therapy performed:
  Light, medium, moving and needle cupping (no strong cupping)

RESULTS

- Clinical Outcomes:
- MYMOP questionnaires indicated 95% patients reported an improvement in their symptoms with therapy.
- Significant improvements were seen in the main and secondary complaints and in the activity levels of the patients.

RESULTS

- **Mean change in MYMOP scores during cupping therapy:**

Parameter	Mean Change
Main Symptom	-2.1
Secondary Symptom	-2.0
Activity	-1.8
Wellbeing	-0.3

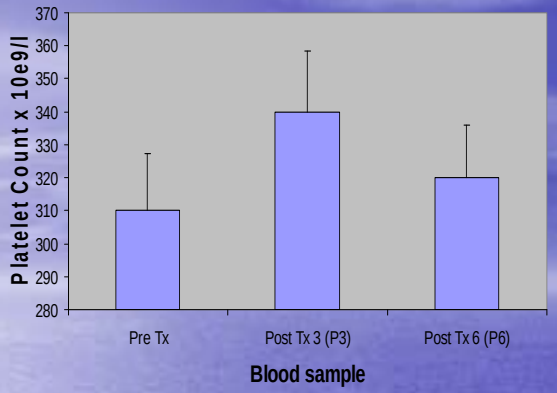
(A change of 1 or more is considered clinically important and a negative signed change indicates improvement)

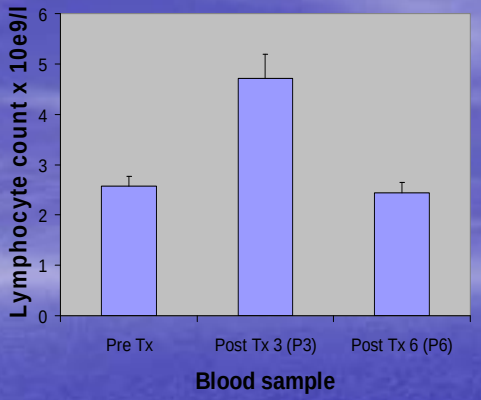
RESULTS

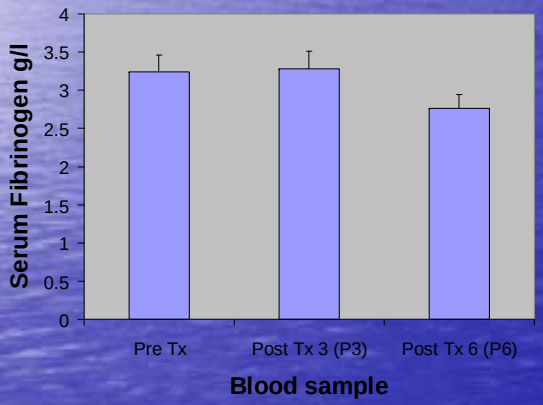
- Blood Analysis:
- Following parameters measured: Hb, RBC, Total WBC, Platelets, Neutrophils, Lymphocytes, Monocytes, Eosinophils, Basophils, ESR, Fibrinogen, CRP, IgG, Ferritin.
- Serum concentrations of pro-inflammatory cytokines (IL-1β, IL-6, IL-10 and TNF-α).

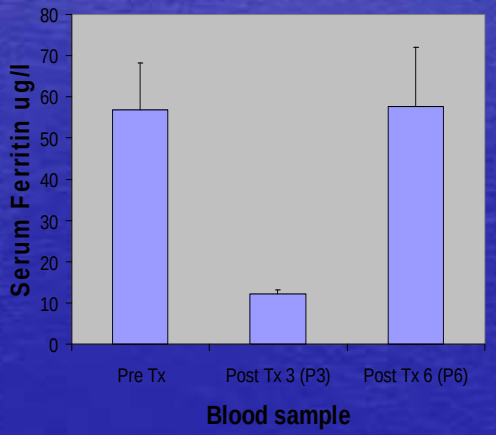
ESR

- The ESR measures the rate at which red blood cells sediment to form a pellat in serum.
- A blood sample is introduced into a thin glass tube, gently mixed then allowed to stand.
- The rate of red cell sedimentation is determined by red cell properties and plasma viscosity.









- **Statistically significant changes in the platelet count ($p < 0.05$), lymphocyte count ($p = 0.0001$), serum concentration of fibrinogen ($p < 0.001$) and ferritin ($p < 0.001$)were observed.**

- Platelets – involved in the haemostatic response and activated by endothelial damage and produce inflammatory mediators.
- Lymphocytes – mediate adaptive immunity and found in chronic inflammation.
- Fibrinogen – Serum protein and acute phase reactant. Levels increase in inflammatory response.
- Ferritin – Serum protein and acute phase reactant. Levels increase in inflammatory response.

RESULTS

- Serum cytokines: no change except in one patient.
- Elevated TNF-α, IL-6 and IL-10 but not IL-1β in sample taken during treatment.

RESULTS

- Most cellular/biochemical changes seen at during treatment time point (after 3 treatments).
- MYMOP scores suggest that for most patients, significant improvements occurred during treatments 4 – 6.

Patient A

- Female, 38 years, lower back pain, feeling hot (Kid Qi + Yin Xu)
- Medium-light cupping was prescribed.
- Analysis of blood and serum also showed:
  - elevated ESR pre-treatment
  - a release of proinflammatory cytokines and increase in CRP and ESR at the during treatment sample
  - after treatment and post treatment samples showed a reduction in these parameters with ESR returning to almost levels post treatment.

Patient A

- This correlated with MYMOP scores.
- Patient A reported no improvement in MC in first 3 treatments (score 4) but a significant improvement after the final 3 treatments (score 2).
- In this patient, did cupping stimulate healing by inducing an initial inflammatory response?

CONCLUSIONS

- Exact mechanism by which cupping therapy exerts its effects could not be determined.
- Cupping therapy significantly effects the levels of certain immune cells and inflammatory markers.
- These changes correlate with clinical outcome.

CONCLUSIONS

- Cupping may exert local inflammatory response through local vascular damage (increased platelets and lymphocytes) which stimulate healing (as in Patient A?).
- Cupping may induce an anti-inflammatory response by inhibiting cellular migration of immune cells to tissues (accounting for increased lymphocytes and platelets) and reducing levels of acute phase proteins (fibrinogen and ferritin).
- Frequency of treatments may be important and may account for differences observed between this study and the earlier study.

ACKNOWLEDGEMENTS

- British Acupuncture Council – funding the study.
- Haematology and Clinical Biochemistry Depts, Queen Alexandra Hospital, Portsmouth – blood sample analysis.
- School of Pharmacy & Biomedical Sciences, University of Portsmouth – hosting the trial.