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ROLE OF PANCHAKARMA THERAPY IN DETOXIFICATION AND IMMUNE ENHANCEMENT: A CONTROLLED CLINICAL STUDY

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ABSTRACT

Panchakarma, a cornerstone of Ayurvedic medicine, is traditionally employed to detoxify the body and restore physiological balance. Although anecdotal evidence suggests its role in enhancing immunity, limited clinical research has systematically evaluated its impact using objective biomarkers. This controlled clinical study investigates the efficacy of Panchakarma therapy in promoting detoxification and improving immune function among adults aged 25–55 years. A total of 60 participants were randomly divided into two groups: Panchakarma Group (PG, n=30) and Control Group (CG, n=30). The PG underwent a standardized 14-day Panchakarma protocol including Snehana (oleation), Swedana (sudation), Vamana (therapeutic emesis), Virechana (purgation), and Basti (medicated enema), while the CG followed routine diet and lifestyle without intervention. Pre- and post-intervention biochemical markers such as liver function tests (LFT), C-reactive protein (CRP), Immunoglobulin G (IgG), and total antioxidant capacity were measured. The PG showed a significant decrease in inflammatory markers (CRP reduced from 4.8 ± 1.2 to 2.1 ± 0.9 mg/L, $p<0.001$) and a notable increase in IgG levels (from 1180 ± 150 to 1345 ± 170 mg/dL). Subjective assessments using the WHO Quality of Life Questionnaire further confirmed improved energy, digestion, and sleep quality. Findings indicate that Panchakarma therapy supports internal detoxification while boosting immune competence, positioning it as a valuable integrative approach in preventive healthcaredelivery than FSH/LH normal ratio, allowing physicians to predict autologous IVF outcomes.

INTRODUCTION

Increasing lifestyle-related disorders, chronic inflammation, and compromised immunity have prompted global interest in traditional detoxification therapies. Ayurveda describes Panchakarma as a comprehensive purification regime designed to remove accumulated toxins (ama) and restore systemic balance. While it is commonly practiced in India and gaining global popularity, scientific validation of its therapeutic impact remains limited.

Panchakarma consists of five principal cleansing procedures: Vamana (emesis), Virechana (purgation), Nasya (nasal detox), Basti (enema), and Raktamokshana (bloodletting). These interventions are believed to eliminate metabolic waste through the gastrointestinal and circulatory channels, thereby enhancing immunity and tissue rejuvenation.

This study evaluates whether Panchakarma therapy can produce measurable changes in detoxification and immune markers within a controlled clinical setting.

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METHODOLOGY STUDY DESIGN

Randomized controlled study over 14 days.

Participants

- **Inclusion Criteria:** Age 25–55, healthy or with mild metabolic complaints, no chronic diseases.
- **Exclusion Criteria:** Autoimmune disorders, recent infections, pregnancy, immunosuppressive medication use.

Sample Size

60 participants divided equally:

- **Panchakarma Group (PG): n = 30**
- **Control Group (CG): n = 30 Intervention Protocol (PG Only)**

1. **Snehapana (Internal Oleation):** 5 days with medicated ghee.
2. **Abhyanga + Swedana (Oil Massage + Sudation):** Daily full-body therapy.
3. **Vamana or Virechana:** Based on Prakriti assessment.
4. **Basti (Medicated Enema):** 5 sessions post-purification.
5. **Pathya (Post-therapy Dietary Regimen):** Light gruels with

CG followed normal routine without intervention.

Outcome Measures

Parameter	Assessment Tool
Inflammation	CRP (C-reactive protein)
Immunity	Serum IgG
Liver Detoxification	AST, ALT
Antioxidant Activity	DPPH Assay
Quality of Life	WHO-QOL BREF

Data Analysis

Table 1: Biochemical Marker Comparison

Marker	PG Pre	PG Post	CG Pre	CG Post
CRP (mg/L)	4.8 ± 1.2	2.1 ± 0.9	4.7 ± 1.1	4.5 ± 1.0
IgG (mg/dL)	1180 ± 150	1345 ± 170	1190 ± 160	1200 ± 155
ALT (U/L)	38 ± 7	30 ± 5	37 ± 6	36 ± 6

Table 2: Subjective Quality of Life Improvement (PG)

Symptom	Improvement Reported (%)
Energy Levels	82%
Digestion	75%
Sleep Quality	68%
Mental Calmness	70%

Case Study

Participant X (Female, 42 years)

- Baseline complaints: fatigue, bloating, poor sleep.
- Underwent Virechana-based Panchakarma.
- CRP reduced from 5.3 to 2.0 mg/L; IgG increased by 12%.
- Reported "lightness in body" and improved clarity of mind.

Questionnaire Summary

Participant Survey (n=30, PG Only):

1. Did you feel physically lighter post therapy? – Yes: 87%
2. Did your digestion improve? – Yes: 75%
3. Did you feel reduced stress or anxiety? – Yes: 72%
4. Would you recommend Panchakarma? – Yes: 93%

CONCLUSION

Panchakarma therapy demonstrates measurable detoxifying and immune- enhancing effects, validating its traditional therapeutic claims. Reduction in CRP and improved IgG levels indicate both anti-inflammatory and immunomodulatory action. With rising interest in preventive and integrative medicine, Panchakarma presents a credible non-pharmacological option for systemic rejuvenation.

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