



COMPARATIVE STUDY OF FERRUM PHOSPHORICUM 6X AND NATRUM MURIATICUM 6X IN THE TREATMENT OF IRON DEFICIENCY ANAEMIA OF FEMALE: A RANDOMIZED CONTROLLED TRIAL

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ABSTRACT

Background: Iron deficiency anaemia is a common nutritional disorder and an important health problem among women in India. Young women aged 18–25 years are vulnerable because of menstrual blood loss, inadequate dietary intake and lifestyle-related stress. **Objective:** To compare Ferrum phosphoricum 6X and Natrum muriaticum 6X in iron deficiency anaemia among females aged 18–25 years using clinical and haematological outcomes (Hb, MCV, MCH). **Methods:** Prospective interventional, double-arm randomized controlled clinical study. 30 clinically diagnosed cases selected from OPD/IPD of Parul Institute of Homoeopathy and Research. Randomization into Group A: Ferrum phosphoricum 6X (n=15) and Group B: Natrum muriaticum 6X (n=15). Detailed case taking, clinical assessment and CBC evaluation performed at baseline, 3 months and 6 months. Statistical analysis by Repeated Measures ANOVA, Paired t-test and Unpaired t-test. **Results:** Age distribution 18–20y 40%, 20–22y 50%, 22–25y 10%. Occupation: Students 46.7%, Job 33.3%, Housewives 20%. Most common contributory factor: Poor nutritional diet 66.7%. Both groups showed highly significant improvement over time for Hb, MCV, MCH ($p < 0.001$). Paired t-tests showed highly significant within-group improvement ($p < 0.0001$). Between-group net gain comparison showed $p > 0.05$ (Hb $p = 0.5201$, MCV $p = 0.5109$, MCH $p = 0.8851$) – No statistically significant difference. **Conclusion:** Both Natrum muriaticum 6X and Ferrum phosphoricum 6X showed significant improvement in clinical and haematological parameters. However, the study failed to establish superiority of either medicine. Null hypothesis could not be rejected.

KEYWORDS : Iron Deficiency Anaemia, Ferrum Phosphoricum 6X, Natrum Muriaticum 6X, RCT, Hb, MCV, MCH, Homoeopathy

INTRODUCTION

Iron deficiency anaemia (IDA) is a common nutritional disorder and an important health problem among women. According to National Family Health Survey (NFHS-5) data, its prevalence remains persistently high across populations. Young women aged 18–25 years are particularly vulnerable due to a combination of physiological menstrual blood loss, inadequate dietary intake, academic or work stress, and lifestyle factors.

Fatigue accompanied by exertional dyspnoea represents the most common clinical presentation. Homoeopathic tissue salts offer a holistic, non-toxic therapeutic approach to managing nutritional anaemia:

- **Ferrum Phosphoricum:** Known as an essential oxygen carrier and primary first-stage remedy in inflammatory and anaemic states.
- **Natrum Muriaticum:** Regulates cellular water distribution and is indicated in anaemia associated with chronic effects of grief, malabsorption, and poor nutritional assimilation.

This randomized controlled trial was conducted to compare the efficacy of both remedies using objective haematological indices.

AIM & OBJECTIVES

1. To compare Ferrum phosphoricum 6X and Natrum muriaticum 6X in the treatment of iron deficiency anaemia among females aged 18–25 years.
2. To assess changes in haematological parameters (Haemoglobin [Hb], Mean Corpuscular Volume [MCV], and Mean Corpuscular Haemoglobin [MCH]) post-treatment.
3. To evaluate clinical improvement in presenting signs and symptoms.

MATERIALS AND METHODS

- **Study Design:** Prospective interventional, double-arm

randomized controlled clinical study.

- **Sample & Sampling:** 30 eligible female patients selected from OPD/IPD of Parul Institute of Homoeopathy and Research and randomized equally into Group A (Ferrum phosphoricum 6X, n=15) and Group B (Natrum muriaticum 6X, n=15).
- **Inclusion Criteria:** Females aged 18–25 years, clinically diagnosed IDA with baseline Hb < 12 g/dL, microcytic hypochromic indices, and willing to comply with follow-up.
- **Exclusion Criteria:** Anaemia due to other causes (e.g., thalassemia, active hemorrhage), chronic systemic diseases, pregnancy, or recent oral/parenteral iron supplementation.
- **Intervention & Follow-up:** Administration of prescribed 6X tissue salt dosages with monthly clinical monitoring. Complete Blood Count (CBC) evaluations performed at baseline (0 months), 3 months, and 6 months.
- **Statistical Analysis:** Data evaluated using Repeated Measures ANOVA, Paired t-test (within-group comparison), and Unpaired t-test (between-group comparison) via SPSS software.

OBSERVATION AND RESULTS

Participant Baseline Demographics

Demographic Variable	Category	Distribution n (%)
Age Distribution	18–20 years	12 (40.0%)
	20–22 years	15 (50.0%)
	22–25 years	3 (10.0%)
Occupational Status	Students	14 (46.7%)
	Job / Employed	10 (33.3%)
	Housewives	6 (20.0%)
Contributory Factors	Poor nutritional diet	20 (66.7%)
	Work stress	10 (33.3%)
	Combined diet & stress	12 (40.0%)

Haematological Outcomes: Baseline vs. 6 Months

Parameter	NM 6X Base	NM 6X 6M	P-value	FP 6X Base	FP 6X 6M	P-value
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Hb (g/dL)	10.16 ± 0.89	11.32 ± 0.73	60.57 001	< 0.001	10.12 ± 1.04	11.19 ± 0.78	30.00 001	< 0.001
MCV (fL)	75.87 ± 5.38	80.60 ± 4.15	39.44 001	< 0.001	73.07 ± 4.64	78.13 ± 3.29	30.00 001	< 0.001
MCH (pg)	23.88 ± 2.22	27.65 ± 1.79	39.78 001	< 0.001	23.41 ± 1.89	27.19 ± 0.89	28.13 001	< 0.001

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Between-Group Comparison of Net Gain

Outcome Parameter	Natrum Mur Net Gain	Ferrum Phos Net Gain	t-value	p-value (Significance)
Hb (g/dL)	1.160	1.070	0.652	0.5201 (NS)
MCV (fL)	4.733	5.530	-0.666	0.5109 (NS)
MCH (pg)	3.767	3.860	-0.148	0.8851 (NS)

* NS = Not Statistically Significant ($p > 0.05$). Both treatment groups demonstrated statistically equivalent improvements.

DISCUSSION

The majority of participants fell into the 20–22 year age bracket (50.0%), representing college-going females exposed to irregular dietary schedules, hostel food, and academic stress. Poor nutritional diet was identified as the predominant contributory factor (66.7%), aligning with existing epidemiological literature in young Indian females.

Serial evaluations of Haemoglobin (Hb), Mean Corpuscular Volume (MCV), and Mean Corpuscular Haemoglobin (MCH) demonstrated progressive, time-dependent increases in both study arms. Repeated Measures ANOVA and Paired t-tests confirmed highly significant intra-group improvements ($p < 0.001$) over the 6-month period.

However, inter-group comparative analysis via Unpaired t-test revealed no statistically significant differences in net gain between Natrum muriaticum 6X and Ferrum phosphoricum 6X ($p > 0.05$ for all parameters). This finding aligns with homoeopathic principles of individualization: while both remedies effectively target anaemic pathophysiology, they operate through complementary modes of action—Ferrum phosphoricum enhances oxygen transport and erythrocyte formation, whereas Natrum muriaticum corrects fluid distribution and underlying nutritional assimilation disturbances.

CONCLUSION

- Both Natrum muriaticum 6X and Ferrum phosphoricum 6X produced statistically significant clinical and haematological improvements in females with iron deficiency anaemia.
- Intra-group increases in Hb, MCV, and MCH were highly significant ($p < 0.001$) across 6 months of intervention.
- Inter-group comparison demonstrated no statistically significant difference in treatment efficacy between the two remedies ($p > 0.05$). Consequently, neither medicine proved superior, and the null hypothesis could not be rejected.

Limitations & Future Scope

- Sample Size & Scope:** A total sample size of $n=30$ limits generalizability and statistical power.
- Setting:** Single-center institution with purposive sampling may introduce selection bias.
- Future Recommendations:** Multi-center, double-blind randomized trials with larger sample cohorts and comprehensive iron profile parameters (Serum Ferritin, TIBC, RDW, Serum Iron) are recommended for future research.

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