

A PILOT STUDY ON NAAD PARIKSHA (PERCUSSION) IN PATIENTS WITH LIVER CIRRHOSIS

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ABSTRACT

BACKGROUND: *Naad Pariksha* (Classical Percussion), a traditional diagnostic tool in Ayurveda, involves the assessment of internal organ states through sound analysis during percussion. Liver cirrhosis, a chronic degenerative condition marked by fibrosis and altered hepatic architecture, significantly affects abdominal resonance.

OBJECTIVE: This pilot study aims to explore the clinical utility of *Naad Pariksha* in patients diagnosed with liver cirrhosis and to identify dominant Naad patterns.

METHODS: A total of 50 patients with liver cirrhosis (diagnosed on the basis of clinical and radiologic findings) were assessed using *Panchabhautik Naad Pariksha* (traditionally developed abdominal percussion methods of Vaidya Atmaram Vaman Shastri Datar). Percussion was performed on standard abdominal zones (nine quadrants of abdomen), and the quality of sound was categorized based on *Panchamahabhuta* (type of sounds manually assessed on the basis of frequency, intensity and peach-purely subjective method) dominance: Parthiv (earthy) Naad, Apya (watery) Naad, Tejas (fiery) Naad, Vayaviya (airy) Naad, and Akashiya (ethereal) Naad.

Results: In the majority of patients, Naad with predominant Parthiv characteristics was observed. These sounds were described as heavy, dull, and resistant, typically found over ascetic regions and fibrotic liver zones.

Conclusion: The findings suggest that *Parthiv Naad* [42 patients (84%)] is dominant in cirrhotic livers, possibly due to fibrosis and fluid retention, correlating with the earthy and solid nature of Parthiva Mahabhuta. Naad Pariksha may serve as a valuable adjunct in the Ayurvedic assessment of liver pathologies.

Introduction:

Ayurveda defines the integration of *Sharira* (body), *Indriya* (sense organs) *Sattva* (mind), and *Atma* (soul) as life [1] and their uninterrupted integration as health and for disease diagnosis and treatment. Among the *Ashtasthana* Parikshas (eight diagnostic methods defining fundamental diagnosis), *Naad Pariksha*—the auditory assessment (percussion) of internal organs—has traditionally been used but underutilized in

modern clinical settings. *Panchamahabhuta* (five-element theory) supports the premise that every bodily structure and function is composed of varying combinations of these elemental principles: *Prithvi* (earth), *Apas* (water), *Tejas* (fire), *Vayu* (air), and *Akasha* (ether). Liver cirrhosis is a condition marked by irreversible scarring of the liver due to chronic liver damage. It is associated with changes in hepatic consistency, fluid accumulation (ascites), and fibrosis, features that may significantly

alter abdominal percussion notes. This pilot study investigates whether *Naad Pariksha*, guided by *Panchabhautik* principles [2], can serve as a supplementary diagnostic tool in liver cirrhosis by detecting predominant *Naad* types that correspond to pathological changes. Additionally diagnosis on the basis of *Panchabhautika Siddhanta* helps to guide the Ayurveda treatment modalities. Though liver cirrhosis is common diagnosis in modern medicines, but meticulous permutations of Ayurveda *Panchabhautika Siddhanta* and *Naad Pariksha* yield multiple sets of Ayurveda diagnosis which helps to prescribe the exact medicine based on *Prakriti*, dominance of *Panchamahabhoota* etc[3,4].

AIMS AND OBJECTIVES

- To observe the *Naad* patterns (dominance of specific *Panchabhautika Nada*) in patients with liver cirrhosis using percussion-based *Panchabhautika Naad Pariksha*.
- To classify the type of *Naad* perceived based on *Panchamahabhuta* characteristics.
- To identify the dominant *Mahabhuta* reflected in the *Naad* of cirrhotic livers.

| Naad Type | Mahabhuta | Characteristics [9] |
|-----------|-----------|------------------------------|
| Parthiv | Earth | Dull, heavy, hard, resistant |
| Apya | Water | Sloshy, fluid-filled tone |
| Tejas | Fire | Crisp, sharp |
| Vayaviya | Air | Tympanic, hollow |
| Akashiya | Ether | Echoing, vast, faint |

All assessments were performed in a controlled clinical setting, and findings were independently confirmed by two experienced Ayurvedic physicians.

RESULTS

MATERIALS AND METHODS

STUDY DESIGN:

Pilot observational study

SAMPLE SIZE:

50 patients diagnosed with liver cirrhosis

STUDY SETTING:

Dr.Ravi Patil Ayurvedic Medical College Hospital and Research centre Honaga Belagavi

INCLUSION CRITERIA:

- Patients aged between 30–70 years
- Diagnosed with liver cirrhosis by ultrasound irrespective of the chronicity of the disease
- Patients presenting with symptoms such as ascites, hepatomegaly, or splenomegaly

EXCLUSION CRITERIA:

- Hepatic malignancy
- Acute hepatic failure
- Severe obesity interfering with percussion
- Uncooperative or unconscious patients

METHODOLOGY:

Naad Pariksha was performed using classical percussion techniques—both direct and indirect—on abdominal quadrants. The percussion sounds were interpreted based on their tonal quality, depth, resistance, and resonance. Observations were categorized under *Panchamahabhuta* dominance: [5,6,7,8]

Out of 50 patients:

- Parthiv *Naad* was observed in 42 patients (84%).
- Apya *Naad* was observed in 5 patients (10%).

- Vayaviya Naad was observed in 3 patients (6%).
- No cases with Tejas or Akashiya Naad were reported.

The predominance of Parthiv Naad corresponded with areas of hepatic fibrosis and ascitic fluid, signifying a compact and dense tissue structure—a hallmark of Parthiva Mahabhuta.

DISCUSSION

Naad Pariksha, when performed skillfully, offers valuable clinical insights. In liver cirrhosis, the liver becomes fibrotic, hard, and non-compliant—physically manifesting the qualities of the Prithvi Mahabhuta [10]. The dull and resistant percussion sound is classically associated with Parthiv Naad, supporting this elemental correlation.

A small subset of patients presented with Apya or Vayaviya Naad, which may reflect early ascitic buildup or underlying gaseous distension. The absence of Tejas and Akashiya Naad confirms the dense, fluid-retentive, and heavy nature of cirrhotic pathophysiology.

This study encourages the revival of Naad Pariksha in modern Ayurveda-based diagnostics, aligning ancient wisdom with contemporary hepatic pathology [11,12,13].

CONCLUSION

The pilot study demonstrates a clear predominance of Parthiv Naad in liver cirrhosis patients, suggesting a tangible elemental manifestation of liver pathology. With further validation, Naad Pariksha may find its place as a non-invasive, affordable, and holistic diagnostic approach within integrative liver care.

LIMITATIONS

- Small sample size
- Subjectivity in Naad interpretation
- Lack of correlation with advanced imaging parameters

FUTURE SCOPE

Larger-scale, multi-centric studies integrating modern acoustic analysis and AI-based sound profiling could enhance the objectivity of Naad Pariksha, making it a powerful tool in integrative diagnostics.

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