

Recovery Through Integrative Siddha Intervention — A Case Narrative of acute Kidney and Liver Failure Following Orthopedic Surgery:

Abstract

Acute kidney injury (AKI) and drug-induced liver injury (DILI) are recognized complications in elderly patients following major orthopedic surgery, particularly in the presence of polypharmacy and critical care interventions. This case report describes a 75-year-old female who developed progressive renal and hepatic dysfunction following femoral fracture surgery and intensive care management. Despite standard nephrological care, biochemical parameters continued to deteriorate. With informed consent and institutional permission, a traditional Siddha herbal formulation (Amrit Sanjeevani Herbal Extract) was administered as an integrative intervention. Subsequent laboratory investigations demonstrated gradual normalization of renal and hepatic markers, leading to clinical recovery and discharge. This case highlights the potential role of evidence-guided siddha and Ayurveda traditional medicine as a complementary modality in critical care

settings and underscores the importance of cooperative, patient-centered integrative practice.

Keywords: Acute kidney injury, liver failure, Siddha medicine, integrative medicine, herbal therapy, case report

Introduction

Acute kidney injury and hepatic dysfunction are common and serious complications in elderly patients undergoing major orthopaedic surgery, especially following repeated surgical interventions, antibiotic exposure, analgesic use, and prolonged intensive care unit (ICU) stay. Drug-induced nephrotoxicity and hepatotoxicity remain well-documented risks in such contexts (KDIGO, 2012; Navarro & Senior, 2006).

Traditional systems of medicine, including Siddha medicine practiced in South India, describe herbal formulations aimed at restoring systemic balance and organ vitality. While such systems are widely used in community settings, their role in critical care environments remains underreported in peer-reviewed literature. This case report presents an integrative clinical narrative where

Siddha intervention was introduced as a complementary approach after standard management showed limited biochemical improvement.

Case Presentation

Patient Information

A 75-year-old female visited Chennai in February 2015 and sustained a domestic fall on **13 February 2015**, resulting in severe pain, swelling of the thigh, and inability to ambulate. She was admitted to a nearby orthopaedic hospital and diagnosed with **a fracture of the femur and ankle injury**.

Clinical Course and Surgical Intervention

Emergency orthopaedic management was initiated, including imaging, analgesia, and laboratory investigations. On **14 February 2015**, surgical fixation of the femoral fracture was performed. A repeat procedure was required on **16 February 2015** due to improper positioning of the fixation screw. Following

the second surgery, the patient was shifted to the ICU for close monitoring.

Development of Renal Dysfunction

On **17 February 2015**, the patient developed facial edema and respiratory discomfort. Initial laboratory investigations revealed elevated renal markers suggestive of acute kidney injury.

Table 1

Initial Renal Biochemical Parameters (17 February 2015)

Parameter	Observed Value	Units	Reference Range
Blood Urea	53	mg/dL	14–40
Serum Creatinine	1.9	mg/dL	0.7–1.2

Note. Values indicate early renal impairment.

Despite nephrology consultation, fluid restriction, and conservative ICU management, renal function continued to deteriorate.

Progression to Multi-Organ Dysfunction

By 18–19 February 2015, renal parameters worsened, accompanied by electrolyte imbalance.

Table 2

Progressive Renal and Electrolyte Changes

Parameter	Observed Value	Units	Reference Range
Blood Urea	68	mg/dL	15–45
Serum Creatinine	2.9	mg/dL	0.6–1.3
Serum Sodium	129	mmol/L	135–145
Serum Potassium	4.7	mmol/L	3.5–5.1

Note. Persistent elevation suggested ongoing renal injury.

Subsequently, laboratory investigations confirmed **acute hepatic dysfunction**.

Hepatic Involvement

By **20 February 2015**, biochemical findings demonstrated severe liver injury alongside renal failure.

Table 3

Renal and Hepatic Biochemical Parameters During ICU Stay

Parameter	Observed Value	Units	Reference Range
Blood Urea	104	mg/dL	15–45
Serum Creatinine	3.9	mg/dL	0.6–1.3
SGOT (AST)	323	IU/L	5–40
SGPT (ALT)	430	IU/L	5–41
Total Bilirubin	7.8	mg/dL	0.3–1.2
Direct Bilirubin	4.8	mg/dL	0.0–0.3
Indirect Bilirubin	3.0	mg/dL	0.2–0.9
Serum Sodium	122	mmol/L	135–145

Note. Findings indicate combined acute kidney injury and hepatocellular damage.

Integrative Siddha Intervention

As the patient's clinical and biochemical status continued to decline, the treating team permitted an **integrative Siddha intervention** following written informed consent from the family. A traditional herbal formulation, **Amrit Sanjeevani Herbal Extract**, was administered with the therapeutic intent of renal and hepatic support. No additional pharmacological agents were introduced concurrently.

Outcome and Follow-Up

Clinical improvement was noted within 48 hours of Siddha intervention, including improved urine output, reduced

abdominal distension, stabilization of mental status, and reduction in vomiting.

Table 4

Biochemical Improvement Following Siddha Intervention

Date	Blood Urea (mg/dL)	Serum Creatinine (mg/dL)
23 Feb 2015	96	3.3
24 Feb 2015	78	3.2
25 Feb 2015	70	1.9

The patient was discharged on **26 February 2015**. Follow-up investigations on **4 March 2015** demonstrated near-normal renal and hepatic function.

Discussion

This case illustrates the complexity of managing elderly postoperative patients who develop multi-organ dysfunction. While modern medicine remains indispensable for trauma care and surgical stabilization, this report suggests that selected traditional interventions may offer complementary benefits in restoring physiological balance when standard care alone yields limited improvement.

Importantly, this outcome was achieved through **collaborative decision-making**, mutual professional respect, and informed consent—principles essential to integrative medicine. Further controlled studies are warranted to evaluate the safety, mechanisms, and efficacy of Siddha formulations in acute care settings.

Conclusion

The present case supports the concept that integrative approaches, when applied judiciously and ethically, may enhance patient recovery in complex clinical scenarios. Rather than positioning

traditional medicine as an alternative to modern care, this report advocates for **cooperative, evidence-oriented integration** to optimize patient outcomes.

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