International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2024: 7.101

Life Over Limb in Emergency Medicine: A Postpartum Case of Sepsis, Vascular Compromise, and Ethical Decision-Making

Vijaya Kumar[1], Kedarnath B V[2], Salfi P K[3], Bharath G O[4], Nabisath Shamna Minaz[5]

Indiana Hospital and Heart Institute, Mangalore, Karnataka, India

Abstract: ***The emergency department (ED) frequently faces critical decisions, especially when life-saving interventions involve irreversible consequences. We present the case of a 36-year-old postpartum female with severe sepsis secondary to failed limb revascularization and venous gangrene, later diagnosed with mixed connective tissue disease (MCTD) and secondary antiphospholipid antibody syndrome (APLA). This case underscores the importance of prompt multidisciplinary collaboration, timely imaging, aggressive source control, and emotionally charged family counselling. We emphasize prioritizing life over limb in hemodynamically unstable patients and recognize recurrent autoimmune-mediated vascular catastrophes in young females. Crucially, we focus on structured family meetings during urgent emergency situations as pivotal in achieving consensus for limb amputation and promoting optimal patient outcomes.***

Keywords: Emergency department, Revascularization, venous gangrene, mixed connective tissue disease, multidisciplinary

1. Introduction

Emergency physicians often navigate the delicate balance between limb salvage and life preservation under time pressure. This tension becomes even more acute in young, otherwise healthy individuals, especially in the context of rare postpartum autoimmune vascular disorders like APLA and MCTD [1]. Beyond surgical and critical care expertise, prompt and empathetic family engagement becomes paramount in guiding these decisions to support both medical and psychosocial wellbeing.

2. Case Presentation

A 36-year-old woman with known hypothyroidism and two children presented on mechanical ventilation and noradrenaline infusion. She had progressive bilateral lower limb pain and swelling treated as DVT with mechanical thrombectomy, complicated by cellulitis, compartment syndrome, and septic shock. She had a prior first-trimester abortion.

Vitals: BP 124/76 mmHg (on vasopressors), PR 146 bpm, SpO2-100% (MV), GRBS 123 mg/dl, GCS E3VTM6. Examination: Absent dorsalis pedis and posterior tibial pulses, fasciotomy wounds (figure 1). laboratory investigations done (table 1). POCUS (point of care ultrasound): revealed non-compressible veins consistent with DVT (figure 2) and chest x ray (figure 3).

Table 1: Laboratory investigation values and reference values.

Observed values	Reference range
Hb- 10.1 gm%	12-16 gm%
Total counts- 25000/uL	4000-11000/uL
Platelet count-55000/uL	150000-450000/uL
Serum creatinine-1.3mg%	0.2-1.1 mg/dl
Serum sodium- 129 meq/l	135-140 meq/l
Serum potassium-5.3 meq/l	3.5-5.2 meq/l
C-reactive protein- 261.7mg/dl	1-3 mg/dl
Creatine phosphokinase-255.4U/L	10-120u/l
Total bilirubin-1.3mg/dl	0.2-1.1mg/dl
Direct bilirubin-0.9mg/dl	Upto 0.2mg/dl
SGOT-168 U/L	10-40U/L
SGPT-148U/L	7-56U/L
ALP-221U/L	40-140U/L
PH-7.14	7.35-7.45
PCO2-34.8mmhg	35-45mmhg
HCO3-11.4meq/l	22-26meq/l
Lactate-2.27mmol/l	0.5-1.5mmol/l

Figure 1: Fasciotomy wound and ischemic changes in left lower limb

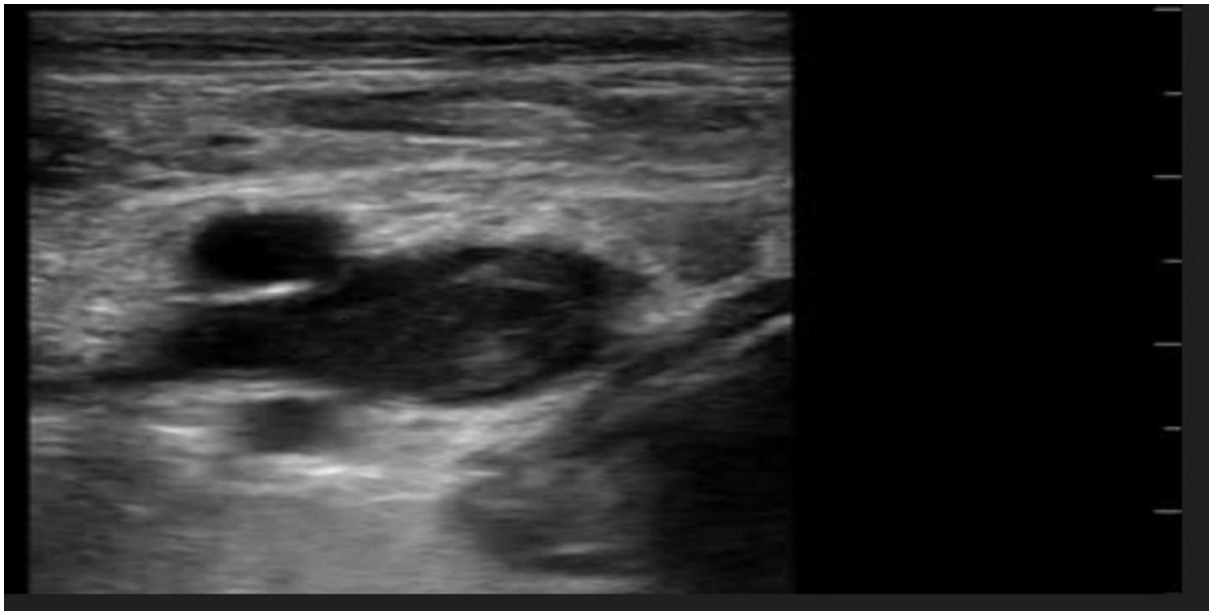

Figure 2: POCUS showing non compressible left femoral vein with DVT

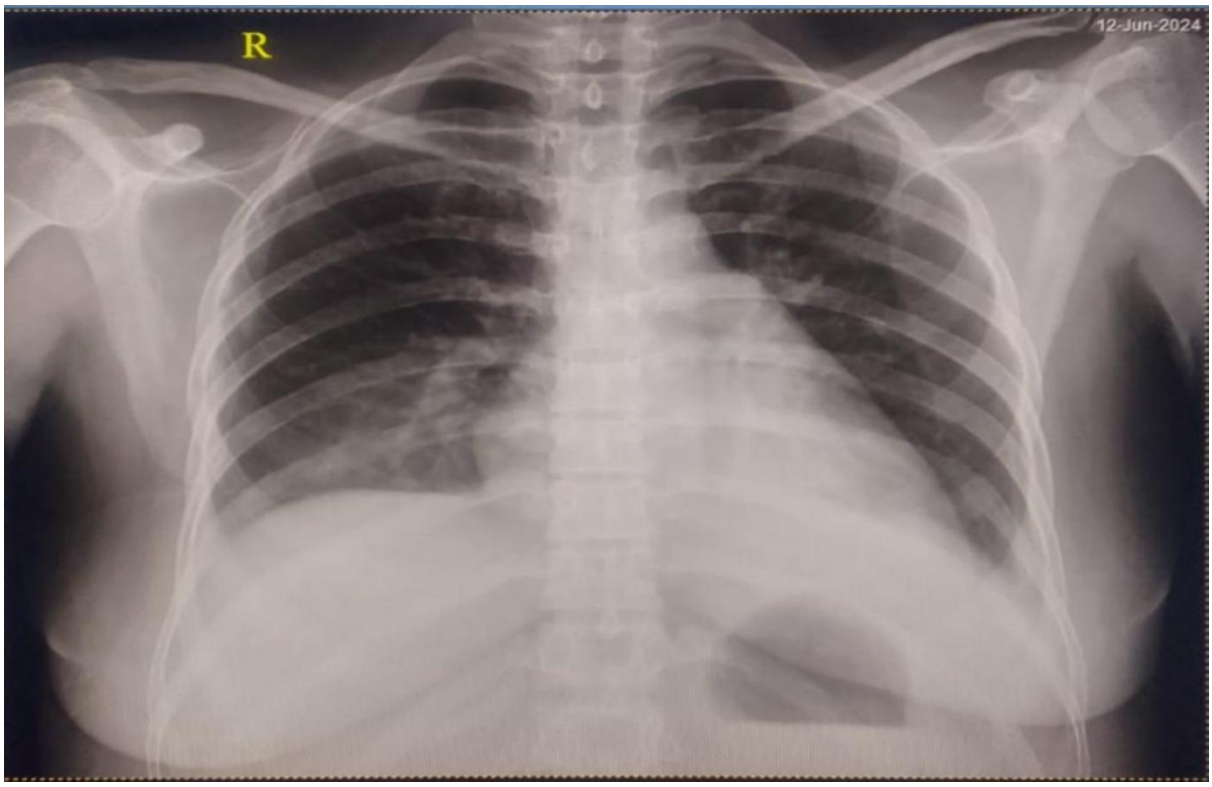

Figure 3: Chest X ray

Management and Decision-Making

Despite aggressive resuscitation (fluids, antibiotics, bicarbonate, vasopressors), the patient's hemodynamic status worsened. Surgical evaluation revealed extensive soft-tissue necrosis and impending systemic compromise. Emergency above-knee amputation was recommended as the only life-saving intervention [2].

The Family Meeting: A Central Pivot- Initial family consent was withheld. Recognizing their emotional distress and the urgency of the situation, a structured family meeting was convened.

Setting: Private room; attending physician, surgeon, ICU team, and a senior nurse participated. Communication Strategy: We followed the SPIKES protocol to break the gravity of the situation gently yet clearly [3]. Goals: Build rapport and trust. Convey current medical status in simple, non-technical language. Explain the risks of delaying AKA-progressive sepsis, multiorgan failure, death [3]. Outline expected outcomes: life expectancy, rehabilitation needs, prosthesis, quality of life [2,3]. Elicit family values and concerns, allowing them to ask questions.

Outcome: After empathetic and transparent discussion, the family consented. The patient underwent Above knee amputation within the hour, resulting in stabilization and

survival. Family meetings in emergent surgery improve shared decision-making and reduce conflict-essential when irreversible procedures are required [2,3].

Postoperative Course and Workup: Post-op, the patient was successfully extubated on day 2, vasopressors were weaned, and she showed marked clinical improvement. Further evaluation revealed: Serologies: ANA: SSA-Ro60, U1-snRNP; APLA antibodies positive. CECT Abdomen: Extensive iliac veins to inferior venacaval thrombosis; right adrenal nodule (figure 4).

She was diagnosed with MCTD and secondary APLA. Treatment included high-dose steroids, hydroxychloroquine, methotrexate, and low-molecular-weight heparin. She was discharged clinically stable, with prosthetic rehabilitation and multidisciplinary outpatient follow-up.

3. Discussion

Autoimmune Thrombophilia in Postpartum Females Young, postpartum women are at elevated risk for APLA/MCTD-related thrombosis-presentations may include recurrent miscarriages, DVT, and limb-threatening ischemia. High suspicion and early autoimmune workup expedite diagnosis and guide management [4].

Multidisciplinary Emergency Care:
POCUS offered rapid bedside confirmation of DVT. CT imaging delineated the full extent of thrombosis and guided anticoagulation strategy. Collaboration between ED, surgery, rheumatology, haematology, and critical care was instrumental for outcome optimization [3]. Limb vs Life-Source Control Priority-Timely Above knee amputation provided definitive source control for sepsis. Evidence demonstrates that delaying source control increases sepsis mortality [5,6,7,8]. Structured Family Meetings in Emergencies-Family caregivers of amputees endure significant emotional, physical, and financial stresses. Additionally, effective early communication fosters acceptance and shared decision-making. We adopted SPIKES to convey critical information and to create space for emotional processing [2,3]. Mental Health Integration: Amputation impacts body image, autonomy, and psychological well-being. Family support is vital, and structured psychosocial support during hospitalization and beyond improves adaptation [2].

4. Conclusion

In acute vascular catastrophes involving postpartum autoimmune thrombophilia, the “limb vs life” decision hinges not only on surgical timing but on empathetic and structured communication with families. This case emphasizes Rapid bedside imaging and source control. Life-sustaining over limb-preserving decisions in unstable patients. Our case marks the Importance of Strong multidisciplinary teamwork. The transformative role of well-conducted, patient-centred family meetings. Integration of mental health and caregiver support into care plans.

Declarations
Conflict of interest: nil
Funding: no funding
Institute: Indiana hospital and heart institute, Pumpwell circle- Mangalore, Karnataka state, India

References

[1] Merashli M, Jawad A: Mixed connective tissue disease: A comprehensive review. Clin Rheumatol. 2015, 34(3):449-458. 10.1007/s10067-014-2840-3.
[2] Çamur D, Genç V, Çelebican Gülbay B.: Needs of family caregivers of people with lower limb amputations: a scoping review.. Behav Sci (Basel). 2024, 14(4):326. 10.3390/bs14040326.
[3] Hudson P, Quinn K, O'Hanlon B, et al.: Family meetings in palliative care: Multidisciplinary clinical practice guidelines. BMC Palliat Care. 2008, 07-12. 10.1186/1472-684x-7-12.
[4] Tektonidou MG, Andreoli L, Limper M, et al.: Management of thrombotic and obstetric antiphospholipid syndrome: A systematic literature review for the 2022 EULAR recommendations. . Ann Rheum Dis. 2023, 82(2):162-178. 10.1136/ard-2022-222338.
[5] Reitz KM, Seymour CW, Vates GE, et al.: Association between time to source control in sepsis and 90-day mortality.. JAMA Surg. 2022, 157(2):125-134. 10.1001/jamasurg.2021.5768.
[6] De Waele JJ.: Importance of timely and adequate source control in sepsis and septic shock.. J Intensive Med. 2024, 4(3):281-286. 10.1016/j.jointm.2024.01.002.
[7] Martinez ML.: Impact of source control in patients with severe sepsis and septic shock.. Crit Care Med. 2017, 45(1):11-19. 10.1097/CCM.0000000000002011.
[8] Lipsett PA.: The critical importance of timing of source control in patients with community-acquired sepsis.. JAMA Surg. 2022, 157(9):826-827. 10.1001/jamasurg.2022.2774.

Author Profile

Dr. Vijaya Kumar, consultant- department of emergency medicine Indiana hospital and heart institute (IHHI) Mangalore. Email: vijayvk90[at]gmail.com

Dr. Kedarnath B V, junior resident- department of emergency medicine IHHI Mangalore. Email: bvkedarnath[at]gmail.com

Dr. Salfi P K, consultant- department of emergency medicine IHHI Mangalore. Email: sans8800[at]yahoo.co.in

Dr. Bharath G O, junior resident- department of emergency medicine IHHI Mangalore. Email: itsmebharathgo[at]gmail.com

Dr. Nabisath Shamna Minaz, consultant- department of emergency medicine IHHI Mangalore. Email: shamnaminaz1[at]gmail.com