

NUTRITIONAL MANAGEMENT IN A SYSTEMIC LUPUS ERYTHEMATOSUS PATIENT: CASE REPORT

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BACKGROUND & IMPORTANCE



- Systemic Lupus Erythematosus (SLE) is a chronic autoimmune disease characterized by multisystem involvement, impacting various organs and tissues.
- Severe hypertriglyceridemia and renal dysfunction often complicate the administration of parenteral nutrition (PN), necessitating precise, individualized pharmaceutical intervention to manage these metabolic challenges effectively.

AIM & OBJECTIVES

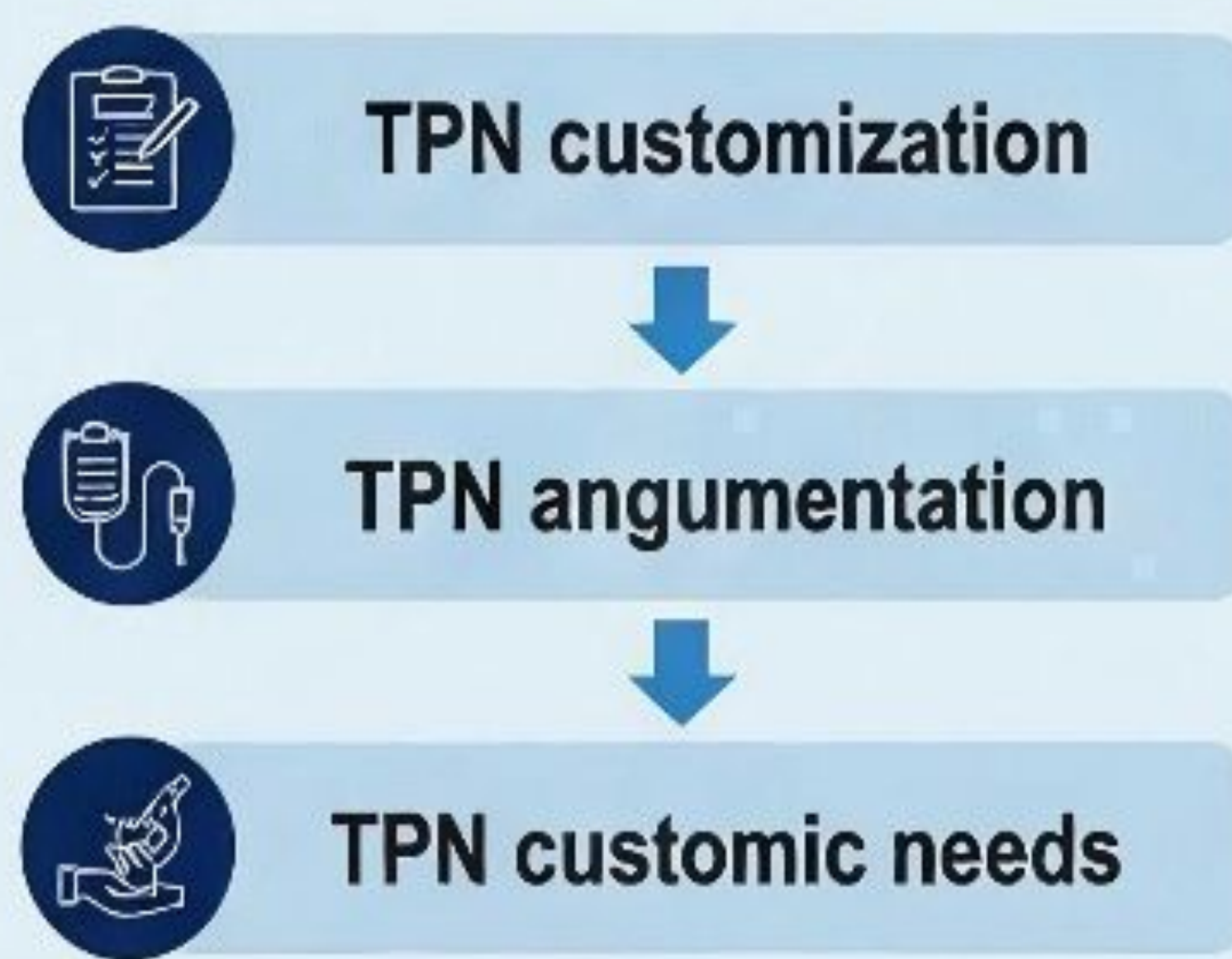


To describe the clinical management and pharmaceutical intervention in a patient with newly diagnosed SLE, acute renal failure, and severe hypertriglyceridemia requiring total parenteral nutrition (TPN).

MATERIAL & METHODS



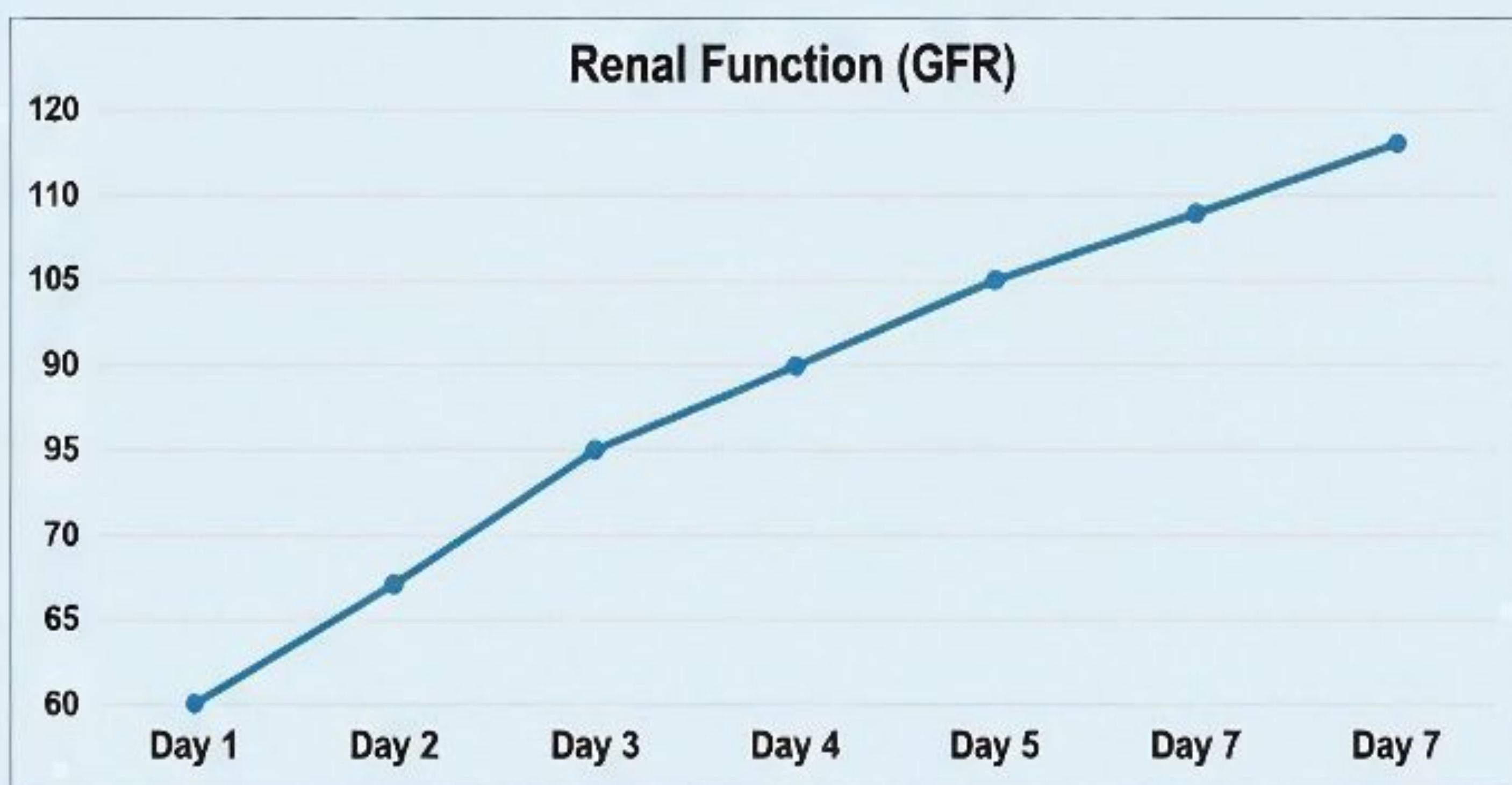
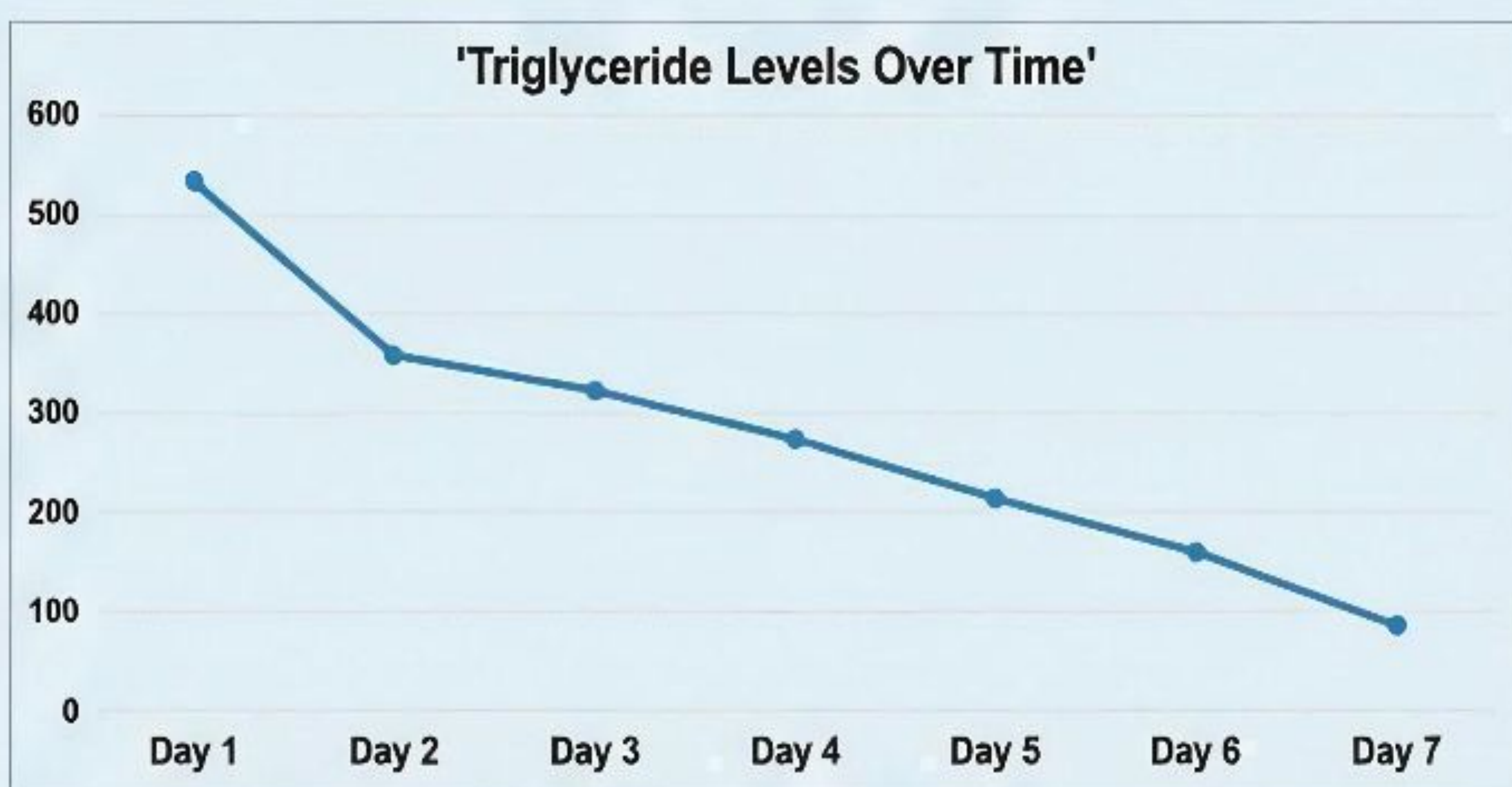
- **Case:** A 32-year-old female patient admitted to the Intensive Care Unit (ICU) in March 2025.
- **Clinical Presentation:** Mixed shock and acute renal failure (GFR 17 mL/min).
- **Immunological Findings:** Positive for anti-dsDNA, anti-Sm, anti-histone antibodies; low complement levels (C3, C4).
- **Metabolic Complication:** Severe hypertriglyceridemia with triglyceride levels at 617 mg/dL.
- **Nutritional Requirement:** Total Parenteral Nutrition (TPN) indicated due to gastrointestinal intolerance.
- **Pharmacy Collaboration:** Active collaboration with endocrinology and nutrition teams to formulate a customized TPN regimen.
- **Energy Requirements:** Calculated at 1980 kcal/day to support metabolic needs.
- **Customized TPN Design:** Tailored formulation accounting for lipid profile, renal function, and specific micronutrient needs, with restricted lipid emulsion infusion rate.



RESULTS



- **7-Day TPN Treatment Outcomes:** Successful implementation of the customized TPN plan.
- **Renal Function:** Progressive improvement observed, with a significant increase in GFR and normalization of serum creatinine levels over the treatment period.
- **Triglyceride Levels:** Marked decrease from initial levels (617 mg/dL) to clinically acceptable levels (<200 mg/dL) without complications.
- **Transition to Oral Supplements:** Successful transition from TPN to oral nutritional supplements tolerated by the patient.



CONCLUSION



- The hospital pharmacist plays a crucial and proactive role in **optimizing parenteral nutrition therapy for complex autoimmune patients.**
- This case highlights the critical importance of **multidisciplinary collaboration between pharmacy, endocrinology, and nutrition specialists** to ensure effective nutritional management, particularly in patients with concurrent severe metabolic and renal complications.
- Individualized pharmaceutical interventions are essential for successful outcomes in complex cases.

