**Integrated Medical Educational Content Prompt: General Medicine and General Surgery**

**Clinical Scenario Prompt:**  
*"Create a real-world clinical case that requires collaborative management by both General Surgery and General Medicine. The case should involve acute surgical emergencies (e.g., trauma, perforation, obstruction, infections) with underlying or concurrent medical conditions (e.g., diabetes, hypertension, cardiac disease). Ensure the scenario reflects challenges in preoperative optimization, intraoperative decisions, and postoperative care coordination."*

**General Medicine Section Prompt:**

**"What medical conditions or systemic issues are present in this case, and how do they affect surgical planning and recovery?"**

* Discuss the **medical pathophysiology**, **clinical presentation**, and **diagnostic approach**.
* Emphasize the **role of medical stabilization**, **chronic disease management**, and **postoperative medical care**.
* Highlight **complications** (e.g., sepsis, electrolyte imbalances, comorbidity-related risks).

**General Surgery Section Prompt:**

**"What are the surgical considerations and interventions for this patient, and how are they influenced by concurrent medical conditions?"**

* Describe the **surgical diagnosis**, **decision-making**, and **operative strategy**.
* Detail **preoperative optimization**, **intraoperative challenges**, and **postoperative surgical care**.
* Discuss **triage**, **damage control surgery**, and **wound/trauma management**.

**Integrated Clinical Understanding Prompt:**

**"How do General Medicine and General Surgery collaborate in this case to ensure safe and effective patient care?"**

* Explain the **interdependence of surgical and medical teams** in managing the patient.
* Discuss **shared decision-making**, **risk stratification**, and **postoperative monitoring**.
* Illustrate how **integration improves outcomes**, especially in complex or resource-limited settings.

**Case Discussion Prompt:**

Provide **2–3 clinically relevant Q&A** integrating both disciplines. Questions should explore:

* Preoperative medical optimization
* Surgical urgency vs. comorbidity risks
* Postoperative complications and interdisciplinary care

**Key Takeaways Prompt:**

Summarize:

* Surgical pathology and its management
* Medical considerations influencing surgical outcomes
* The **importance of integrated, team-based care** in complex clinical scenarios

### Example format

## **Integrated Medical Educational Content: General Surgery & General Medicine**

### ****Topic: Perforated Duodenal Ulcer in a Patient with Uncontrolled Type 2 Diabetes Mellitus****

### ****1. Clinical Scenario****

A 58-year-old male presents to the emergency department with sudden onset of severe epigastric pain radiating to the back, vomiting, and abdominal distension. He has a known history of type 2 diabetes mellitus (T2DM) and poorly controlled blood sugars. On examination, he is tachycardic, febrile, and has guarding with rigidity over the abdomen. Blood glucose is 346 mg/dL. Erect abdominal X-ray reveals free air under the diaphragm. He is diagnosed with perforated duodenal ulcer and signs of peritonitis.

### ****2. General Medicine****

**Question:** What medical conditions or systemic issues are present, and how do they affect surgical planning and recovery?

#### 🔹 Medical Pathophysiology:

• Poor glycemic control impairs immunity, wound healing, and increases infection risk.  
• Diabetic autonomic neuropathy can mask peritoneal signs and delay presentation.  
• Stress response in surgery can further exacerbate hyperglycemia.

#### 🔹 Clinical Approach:

• Monitor HbA1c, electrolytes, renal function, and infection markers.  
• Insulin therapy initiation or adjustment.  
• Optimize hydration, acid-base balance, and cardiac risk (ECG, echocardiogram if needed).

#### 🔹 Medical Management Goals:

• Stabilize glucose preoperatively (IV insulin infusion).  
• Prevent diabetic ketoacidosis or hyperosmolar state.  
• Manage potential sepsis or shock with IV fluids, antibiotics, and critical monitoring.

### ****3. General Surgery****

**Question:** What are the surgical considerations and interventions for this patient, and how are they influenced by concurrent medical conditions?

#### 🔹 Surgical Diagnosis & Intervention:

• Emergency diagnosis: Perforated peptic ulcer (confirmed by pneumoperitoneum).  
• Urgent laparotomy required – Graham’s patch repair or definitive ulcer surgery depending on patient status.

#### 🔹 Surgical Considerations:

• High infection risk due to diabetes—strict aseptic technique.  
• Delayed wound healing expected—consider closed suction drainage.  
• Consider ICU support post-op due to systemic involvement.

#### 🔹 Postoperative Surgical Care:

• Monitor for anastomotic leak, intra-abdominal abscess, surgical site infection.  
• Nutritional support and ulcer prevention strategies (PPI, H. pylori eradication).  
• Early mobilization and glycemic control.

### ****4. Integrated Clinical Understanding****

#### 🔹 Collaborative Role of Medicine & Surgery:

• Preoperative optimization by physicians ensures safer anesthesia and operative outcomes.  
• Intraoperative care by surgeons tailored to minimize surgical time and risk.  
• Postoperative care involves glycemic monitoring, infection control, and coordinated wound care.

#### 🔹 Example:

• A diabetic patient with sepsis and perforation needs insulin infusion (physician) and surgical source control (surgeon). Without integration, outcomes are poor.

### ****5. Case Discussion****

**Q1. Why is it essential to control blood glucose in surgical patients with diabetes?**  
**Answer:** Hyperglycemia impairs neutrophil function, delays healing, increases risk of infections and sepsis, and complicates anesthesia management.

**Q2. What surgical techniques help minimize complications in diabetic patients?**  
**Answer:** Minimal handling of tissues, adequate drainage, perioperative antibiotics, and layered wound closure reduce surgical complications.

**Q3. How do general physicians contribute to postoperative recovery in surgical patients?**  
**Answer:** They manage fluid-electrolyte balance, optimize glucose levels, treat infections, and ensure chronic disease continuity.

### ****6. Key Takeaways****

• **General Medicine:** Diabetes complicates surgical recovery. Glycemic control, fluid-electrolyte balance, and pre-op stabilization are key.  
• **General Surgery:** Perforated ulcer requires urgent intervention. Operative care must consider healing impairment in diabetics.  
• **Integration:** Joint decision-making reduces mortality. Multidisciplinary care improves surgical outcomes in medically complex patients.