# Factor VII deficiency and Remifentanil use

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## Condition Overview

**Rare autosomal recessive disorder** characterized by Factor VII deficiency.

**Presentation:** Mild mucocutaneous bleeding to severe hemorrhage.

INCIDENCE

**1 : 500k**

Rare genetic prevalence

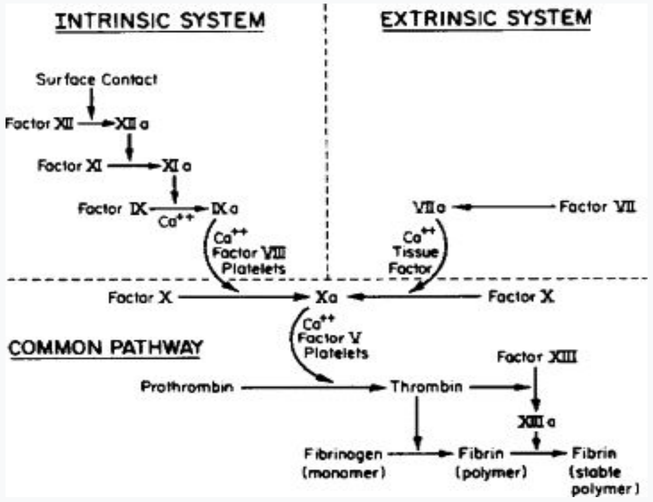
## Anesthetic Management Challenges

**Altered Coagulation Physiology:** Requires precise monitoring of factor levels and clotting times.

**Hemorrhage Risk:** High potential for peripartum bleeding requiring factor replacement but may not always correlate with activity levels with < 10% being the highest risk.

**Neuraxial Contraindication:** Coagulopathy may preclude standard epidural/spinal options.

## Coagulation Cascade




Factor VII is key to the **Extrinsic Pathway**, initiating thrombin generation upon tissue injury.

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# Case Report: Management Summary

## Patient Profile

- 26yo G4P2 @ 38w5d
- PMHx: Factor VII Deficiency, gHTN, asthma

### FVII Activity

**30%**

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## Analgesic Strategy

**Remifentanil PCA (40 mcg q2m)**

- Monitoring: Pulse Ox, ETCO2, 1:1 Nursing
- Setup: Dedicated IV, Patient Education
- Planning: Multidisciplinary pre-delivery meeting

## Labor & Delivery Outcomes

**Interventions**

- IOL
- rFVIIa & TXA administered

**Results**

- Vaginal Delivery (EBL 605 mL; no pRBC requirement)
- Apgar: 8 & 9
- Home on POD3

# Discussion: Remifentanil PCA for High-Risk Labor

## 1. Clinical Viability

**Effective Alternative**

Indicated when neuraxial analgesia is contraindicated (e.g., coagulopathy).

- Reduces morbidity from poorly controlled labor pain.
- Targeted for high-risk patients.
- Apply within a risk–benefit framework; not first-line.

## 2. Safety Protocols

**Strict Monitoring Required**

Risk of respiratory depression and oversedation.

**Mandatory Resources:**

- Continuous SpO2 & ETCO2
- 1:1 dedicated nursing care
- Immediate airway support
- Institutional protocols

## 3. Pharmacokinetics

**Dual-Edged Nature**

**Half-time:** ~3 min (ultrashort) enables rapid recovery.

**Accumulation:** Minimal, making it favorable for labor.

**CRITICAL WARNING:**

Rapid onset leads to unpredictable respiratory depression if titration is not precise.

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