

Postoperative Wound Infection after hip Nailing. A Rare Case of Combined Undiagnosed Myelodysplastic Syndrome, Acute Drug-Induced Thrombocytopenia, and Chronic UTI.

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• **Introduction & Aim:**

Hip fractures in elderly patients are associated with high morbidity and mortality, often complicated by pre-existing comorbidities and active infections. The coexistence of Myelodysplastic Syndrome (MDS) and bacteremia, within the context of drug-induced thrombocytopenia (DIT), represents an extremely critical clinical condition. This case aims to highlight the challenges of managing a 90-year-old patient where a "perfect storm" of hematological and infection complications led to an irreversible clinical decline.

• **Materials & Methods:**

A 90-year-old female was admitted following a fall, sustaining an unstable intertrochanteric fracture. Her medical history included hypertension and chronic urinary tract infection (UTI). During the first day of admission, the patient presented with high temperature. Sepsis screening identified *Escherichia coli* in both urine and blood cultures, and intravenous Piperacillin/Tazobactam was initiated. Once the patient became afebrile and inflammatory markers improved, she underwent surgical stabilization with intramedullary nailing. Postoperatively, she developed a persistent wound hematoma despite the discontinuation of low-molecular-weight heparin (LMWH). An angiography followed by embolization of a gluteal artery branch was performed to control the bleeding.

• **Results:**

Persistent wound leaking led to repeated surgical debridements. Intraoperative cultures revealed a multi-organism growth (*E. coli*, *Pseudomonas aeruginosa*, and *Proteus mirabilis*). Following infectious disease consultation, the nail was removed and Meropenem was administered. Due to refractory anemia and thrombocytopenia, a bone marrow biopsy was performed, confirming MDS. Within 48 hours, the patient developed acute drug-induced thrombocytopenia, which proved irreversible despite immediate discontinuation of suspected medications and platelet transfusions. The patient passed away two months postoperatively due to systemic complications and multi-organ failure.

• **Conclusion:**

The triad of MDS, chronic UTI, and acute drug-induced thrombocytopenia in the setting of a hip fracture constitutes a complex clinical challenge. MDS compromises the immune response and MDS exacerbates postoperative bleeding; furthermore, surgical site hematomas facilitate the proliferation of pre-existing bacteremia. This case emphasizes the necessity for early multidisciplinary intervention and a high index of suspicion for underlying hematological malignancies in elderly patients with atypical postoperative courses.

• **References :**

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