ABSTRACT

Rare and deadly. A case report of iatrogenic vascular injury post BMAT.

Introduction:

Bone marrow, situated within the spongy tissue of larger bones, serves as the primary site for blood cell production. Bone marrow aspiration and trephine biopsy (BMAT) are essential procedures for diagnosing various hematological conditions such as cancers, metastatic diseases, and storage disorders. It is typically involving sampling from the pelvic bones, particularly the iliac crest.

Case Report:

A 76-year-old man with multiple comorbidities underwent elective BMAT at a medical daycare facility. Post-procedure, he complained of lower abdominal pain. Ultrasound abdomen performed, noted to have minimal free fluid at inferior to liver also round mass with mixed echogenicity posterior to bladder around 5x5cm. Doppler scan of the mass revealed no vascularity. Suspicious haematoma arise because of acute onset and ultrasound finding. Proceed with CT imaging, showed pelvic haematoma with evidence of active bleeding likely from the right external iliac vein. Follow-up imaging showed a slightly larger hematoma but no active bleeding or bladder injury.

Discussion:

BMAT is generally safe but can rarely lead to complications like haemorrhage, soft tissue trauma, or infection. Bleeding from the right external iliac vein post-BMAT is exceptionally rare but potentially serious, necessitating immediate measures to control bleeding and stabilize the patient, including possible surgical intervention and blood transfusions. Further evaluation may be required to assess the extent of vascular injury and long-term complications, typically through imaging studies such as ultrasound or CT imaging. Preventing such complications involves adhering to sterile techniques during BMAT and careful site selection to minimize vascular injury risk. Point-of-care ultrasound (POCUS) plays a crucial role in detecting post-BMAT vascular injuries, aiding in timely diagnosis and management.

Conclusion:

POCUS is an instrumental in diagnosing and promptly treating vascular injuries post-BMAT, ultimately optimizing patient outcomes and mitigating further complications. It allows for real time, non-invasive visualisation of vascular structures, making it particularly useful in identifying vascular complications such as haematoma, thrombosis or pseudoaneurysm formation.