EBV-Positive B-cell Lymphoma Masquerading as a Traumatic Hepatic Abscess with Chest Wall Extension: A Complex Case Requiring Multidisciplinary Surgical Management

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Introduction

Epstein-Barr virus (EBV) positive B-cell lymphomas involving the liver are rare. We report an unusual case of a hepatic EBV-positive B-cell lymphoma initially presumed to be a post-traumatic liver abscess following a fall, with progression into a necrotizing infection.

Clinical Presentation

A 54-year-old male with prediabetes and hypertension presented with right upper quadrant abdominal pain after a fall that occurred 2 months prior.

CT abdomen/pelvis demonstrated subacute right-sided rib fractures 5-7 with a large hypodense liver lesion extending through the chest wall anterior to these fractures; peripherally calcified lesion arising from either the right hepatic lobe or retroperitoneum (Figure 1)

Clinical Course

During the index admission, a drain was placed by interventional radiology. The patient underwent laparoscopic debridement of the calcified hepatic abscess cavity, which contained necrotic hepatic parenchyma.
Postoperatively in the outpatient setting, the patient had increasing tenderness to right chest wall with blistering of skin- concern for retained hematoma (Figure 2). Pathology was positive for EBV-positive B-cell lymphoma.
The patient was admitted a second time and underwent debridement of his right chest wall. (Figure 3). Post operatively the patient was started on Pola-R-CHP by oncology.
The patient was admitted several weeks later. During this third admission he underwent further debridement of his wound which had necrosis extending into his liver. He underwent serial debridements with partial hepatectomy of the right lobe of his liver (Figure 4). Once infection was controlled, plastics performed a latissimus myocutaneous flap reconstruction (Figure 5).
Two weeks after this admission, the patient required additional debridement and advancement of the flap (Figure 6).

Figure 1: Initial CT upon admission

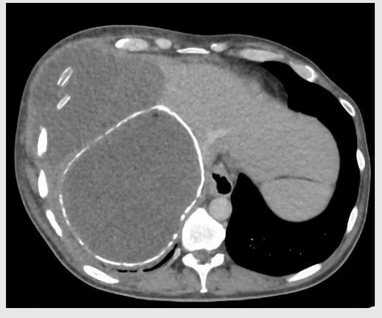


Figure 2: 2 weeks post laparoscopic debridement

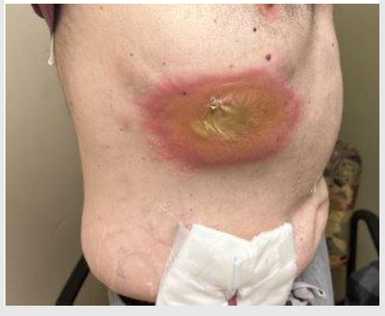


Figure 3: Initial chest wall debridement

Figure 4: Necrosis extending into liver

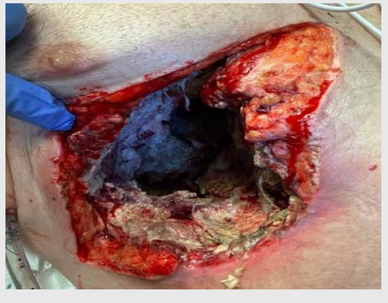


Figure 5: 1 week after latissimus flap creation

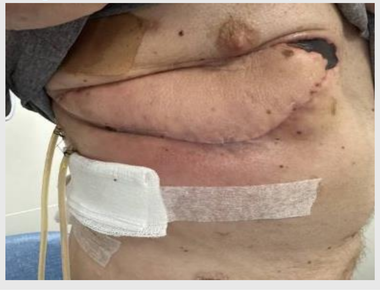
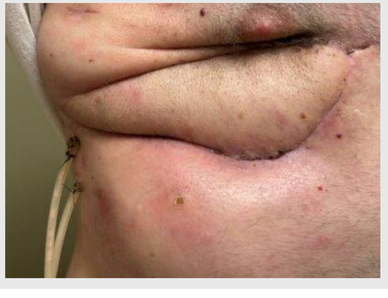


Figure 6: After flap debridement and advancement



Outcome

Postoperative recovery was prolonged but stable. The patient was ultimately discharged and followed closely in clinic by oncology and surgical services. He remained in good condition at follow up. Though his surgical site is healing well, he has continued therapy for his lymphoma by undergoing T-cell immunotherapy at an outside hospital.

Discussion

This case highlights the diagnostic challenge of differentiating post-traumatic abscess from malignancy in atypical hepatic lesions. The initial assumption of traumatic rupture delayed oncologic diagnosis. Progressive local invasion and infection required aggressive multidisciplinary intervention. To our knowledge, isolated hepatic EBV-positive B-cell lymphoma presenting as a calcified abscess with chest wall necrosis has not previously been reported.

Conclusion

Unusual hepatic fluid collections following trauma should prompt consideration of underlying neoplasm. EBV-associated hepatic lymphoma can mimic benign abscesses and require coordinated surgical and oncologic care.

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