CASE REPORT

Prompt successful surgical treatment of spontaneous splenic rupture due to metastatic melanoma: case report

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ABSTRACT

Non-traumatic splenic rupture is a rare condition which requires high suspicion in order to promptly diagnose and provide effective surgical treatment. We present an uncommon such case of a 63-year-old male, who proceeded to the Emergency Department with abdominal pain, nausea and progressive hemodynamic instability. He had a skin melanoma lesion removed a year ago, for which he refused to have a follow-up. Blood tests revealed a drop of hematocrit and the ultrasound showed intraperitoneal fluid and the computed tomography demonstrated a splenic hematoma, as well as multiple splenic and hepatic lesions and a large intraperitoneal effusion. The patient underwent emergency laparotomy and a massive splenic hemorrhage due to capsule rupture as well as multiple metastatic-like splenic and liver lesions were discovered and an emergency splenectomy was performed. Histological analysis revealed a metastatic melanoma to the spleen and the patient was referred to an oncologist.

Keywords: splenic rupture, metastatic melanoma, non-traumatic

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INTRODUCTION

Spleen injuries are among the most frequent trauma-related injuries. On the other hand, non-traumatic splenic rupture is a rare condition which requires high suspicion in order to promptly diagnose and provide effective surgical treatment. Spontaneous splenic rupture due to various etiologies (infectious, neoplasms, inflammation, etc.) arises suddenly without an obvious predisposing factor. We herein present an uncommon case of a 63-year-old male with a past medical history of skin melanoma who developed a spontaneous splenic rupture.

CASE PRESENTATION

A 63-year-old male presented to the Emergency Department (ED) with abdominal pain, nausea. Upon arrival the patient was hemodynamically stable with normal vital signs and diffuse abdominal tenderness to palpation. Concerning his medical history, he was a heavy smoker and had a skin melanoma lesion removed a year ago, for which he refused to have a follow-up. The abdominal plain films were negative. Blood tests revealed a drop of hematocrit from 39.5% to 30.2%. Additionally, the ultrasound showed intraperitoneal fluid and the abdominal computed tomography (CT) demonstrated a

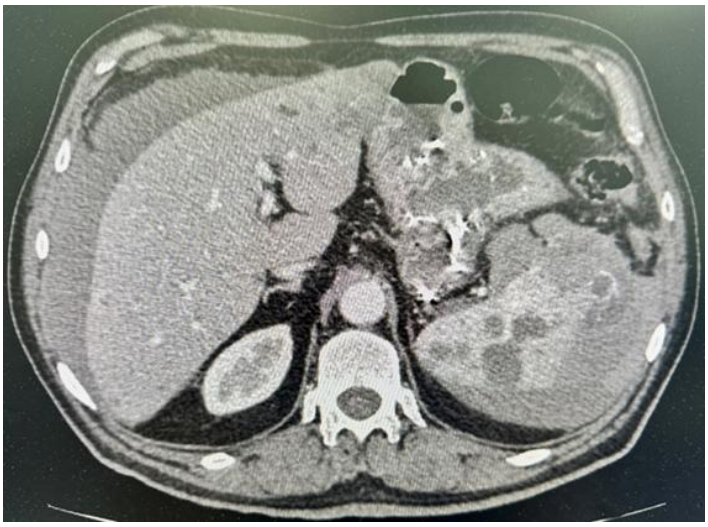

Figure 1. Abdomen CT scan demonstrating multiple splenic lesions, splenic rupture and intraperitoneal effusion.

splenic hematoma, as well as multiple splenic and hepatic lesions and a large intraperitoneal effusion, with measured hounsfield units demonstrating blood (Figure 1). The patient gradually became hemodynamically unstable upon returning from the radiologic department. He was immediately resuscitated and urgently taken to the OR.

During laparotomy a massive splenic hemorrhage due to capsule rupture as well as multiple metastatic-like splenic and liver lesions were discovered and an emergency splenectomy was performed (Figure 2).

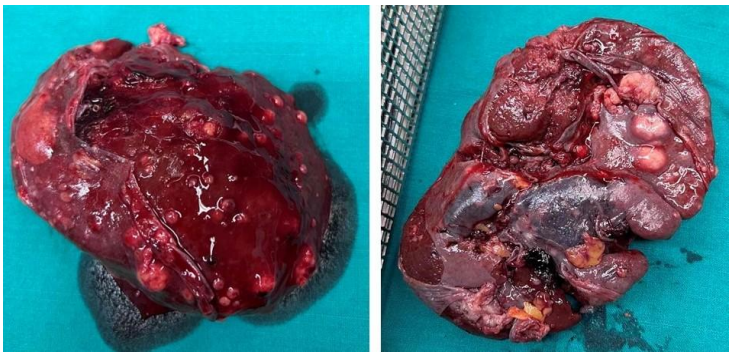

Figure 2. Surgical specimen (spleen) were multiple lesions are observed.

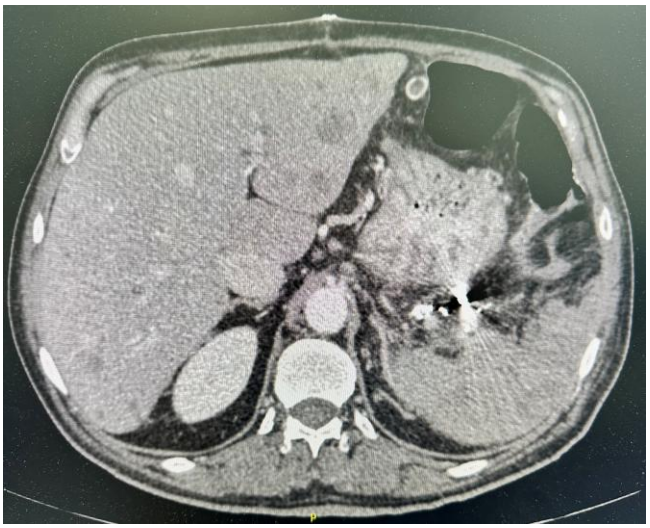

Figure 3. Post-embolization CT scan, were a large hematoma in the splenectomy bed was demonstrated.

On the 6th postoperative day, a bloody content of about 500mL was observed in the drain. A CT angiography and embolization of a splenic artery branch was performed (Figure 3). Histological analysis revealed a metastatic melanoma to the spleen and the patient was referred to an oncologist.

DISCUSSION

Metastatic lesions to the spleen usually originate from breast, lung, colorectal, ovarian carcinomas and less commonly, melanoma in cases of multi-visceral disease. Metastasis of the spleen is an intriguing, rare entity, which is difficult to diagnose early due to the lack of symptoms, resulting in delayed incidental diagnose, years after the primary source of the cancer is confirmed or even urgent surgery after a spontaneous splenic rupture [1,3]. It is considered that this relative rarity of splenic metastases could be explained by anatomic and mechanical factors of the spleen and the inhibitory effect of the splenic microenvironment on the growth of metastatic

cells [2]. According to this theory, angled course of the splenic artery, blood flow, splenic capsule, lack in afferent lymphatics and contractile properties of the spleen may explain the impediment in implantation of tumor cells. Spontaneous splenic rupture [4,5] is a life threatening condition that requires high clinical suspicion and immediate intervention. There are six subgroups concerning etiology of atraumatic rupture of the spleen: I) infectious, II) neoplastic, III) inflammatory, IV) congenital or structural, V) iatrogenic and VI) idiopathic. The patient presents the classic signs and symptoms of left upper quadrant pain, guarding and hemodynamic instability. Contrast-enhanced CT is the imaging modality of choice for this diagnosis. As it happens with all the cases of peritoneal cavity hemorrhage with hemodynamic instability, resuscitation and laparotomy with bleeding control is the optimal surgical treatment.

CONCLUSIONS

Spontaneous non-traumatic splenic rupture is a life-threatening condition that requires high clinical suspicion and immediate intervention. The CT scan remains the gold standard for this diagnosis. As happens with all the cases of peritoneal cavity hemorrhage with hemodynamic instability, laparotomy and bleeding control is the optimal surgical treatment.

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ΠΑΡΟΥΣΙΑΣΗ ΠΕΡΙΣΤΑΤΙΚΟΥ

Άμεση επιτυχής χειρουργική αντιμετώπιση αυτόματης ρήξης σπλήνα λόγω μεταστατικού μελανώματος: παρουσίαση περιστατικού

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ΠΕΡΙΛΗΨΗ

Η μη τραυματική ρήξη του σπλήνα είναι μια σπάνια κατάσταση που απαιτεί υψηλό δείκτη υποψίας ώστε άμεσα να τεθεί η διάγνωση και να εφαρμοσθεί αποτελεσματικά η χειρουργική θεραπεία. Παρουσιάζουμε περίπτωση ανδρός 63 ετών που προσήλθε στο ΤΕΠ με κοιλιακό άλγος, ναυτία και εμφάνισε εκεί προοδευτικά αιμοδυναμική αστάθεια. Το ατομικό αναμνηστικό αφορούσε στην αφαίρεση δερματικού μελανώματος προ έτους, αλλά ο ασθενής αρνήθηκε να υποβληθεί σε τακτική παρακολούθηση. Από τη γενική αίματος διαπιστώθηκε πτώση του αιματοκρίτη, ενώ απεικονιστικά το υπερηχογράφημα ανέδειξε ενδοπεριτοναϊκό υγρό και η αξονική τομογραφία σπληνικό αιμάτωμα, μεγάλη ενδοπεριτοναϊκή συλλογή και πολλαπλές εστιακές βλάβες στο σπλήνα και το ήπαρ. Ο ασθενής υποβλήθηκε σε επείγουσα λαπαροτομία όπου διαπιστώθηκε μαζική αιμορραγία από ρήξη σπληνός και πολλαπλές μεταστατικές εστίες στο σπλήνα και το ήπαρ και διενεργήθηκε σπληνεκτομή. Η ιστολογική εξέταση αποκάλυψε μεταστατικό μελάνωμα στο σπλήνα και ο ασθενής μεταφέρθηκε σε Ογκολογικό τμήμα.

Λέξεις ευρετηρίου: ρήξη σπληνός, μεταστατικό μελάνωμα, μη τραυματική

Φ. Στέφου, Ε. Μπουρμπουτέλη, Γ. Μπεκάκος, Α. Ζαραφίδου, Α. Τσιάκα, Ι. Σιάννης, Ν. Ζαμπίτης, Α. Μαρίνης. Άμεση επιτυχής χειρουργική αντιμετώπιση αυτόματης ρήξης σπλήνα λόγω μεταστατικού μελανώματος: παρουσίαση περιστατικού. Επιστημονικά Χρονικά 2024; 29(3): 487-490

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