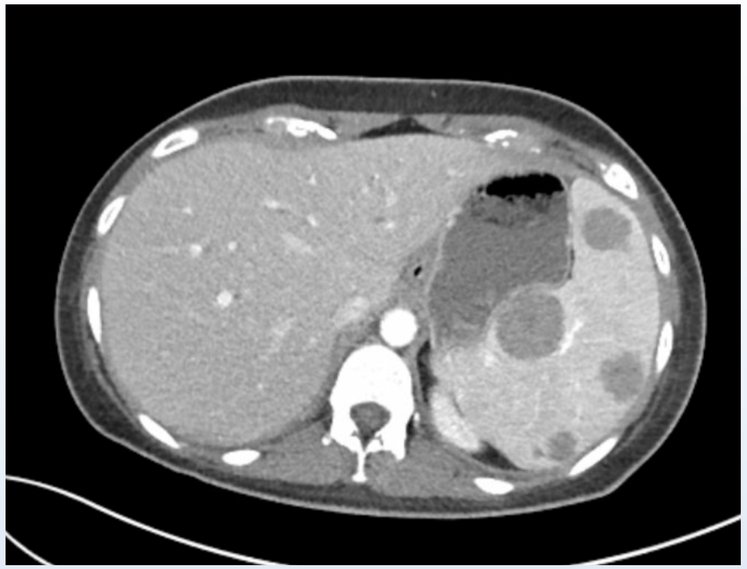
A Case of Metastatic Melanoma to the Spleen with an Unknown Primary Identified after Laparoscopic Splenectomy

Joseph Kuiper MD, Dakota Pastore, Jason Barfuss DO, Alexandra Haraczy MD, Gregory Kunis DO, John Pollock MD, Erin Hart DO, Arielle Brackett MD, and Jaime Giraldo MD

Christiana Care, Newark, DE

Case Presentation

A 28-year-old female with history of intravenous drug use (IVDU), rheumatoid arthritis, chronic hepatitis C who presented right hip osteomyelitis secondary to endocarditis seeded by her known IVDU history. An abdominal CT scan obtained during her admission demonstrated multiple splenic lesions and VIR was consulted for drainage of presumed abscess, which was deferred due to the large number and small size of the lesions. She was later discharged home but re-presented one week later with repeat CT scan (shown) demonstrating many enlarging splenic lesions with splenomegaly despite prolonged antibiotic therapy. A laparoscopic splenectomy was performed, during which there was no intraabdominal spillage, and the spleen was then morcellated in a retrieval bag for removal. The patient recovered uneventfully after surgery and received her post-splenectomy vaccines prior to discharge. Pathology demonstrated a unique finding of metastatic malignant melanoma with no identifiable primary lesion identified on skin exam. She was subsequently initiated on immunotherapy in the outpatient setting. Thus far she has survived without recurrence.



Literature

De Wilt et al[9] performed a retrospective review comparing 15 patients managed with splenectomy to 98 conservatively managed patients with splenic metastasis from melanoma

They showed survival to 11 months for those undergoing splenectomy compared to 4 months for those conservatively managed (p=0.02), and up to 23 months for the subgroup (7) of those with solitary metastasis to the spleen supporting the recommendation for operative management

Discussion

Metastatic melanoma to the spleen is a rare occurrence making up only 2% of melanoma metastases and has rarely been described without a known primary. This case highlights such an occurrence in a young patient with multiple comorbidities and atypical risk factors. The successful laparoscopic approach in this patient underscores its feasibility and safety, even in complex situations, and literature suggests patients receiving splenectomy for solitary metastases may have improved survival. Further studies are needed to better understand the prognosis and optimal management of such cases, but this case and others show that operative intervention offers reasonable outcomes.

References

1.Saginala K, Barsouk A, Aluru JS, Rawla P, Barsouk A. Epidemiology of Melanoma. *Med Sci (Basel)*. 2021;9(4):63. Published 2021 Oct 20. doi:10.3390/medsci9040063
2.Heistein JB, Acharya U, Mukkamalla SKR. Malignant Melanoma. 2024 Feb 17. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan–. PMID: 29262210.
3.National Cancer Institute Melanoma of the Skin-Cancer Stat Facts. [(accessed on 10 May 2021)]; Available online: https://seer.cancer.gov/statfacts/html/melan.html
4.Dusseau B, Onders B, Radulescu A, Abourezk M, Leff J. Metastatic melanoma of the spleen without known primary. *J Surg Case Rep*. 2020;2020(12):rjaa456. Published 2020 Dec 7. doi:10.1093/jscr/rjaa456
5.Sen CA, Kargi A, Kaya V, Tanriverdi O. Isolated and solitary splenic metastasis detected by positron emission tomography in a patient with malignant melanoma: case report and review of the literature. *Contemp Oncol (Pozn)*. 2013;17(2):214-217. doi:10.5114/wo.2013.34627
6.Compérat E, Bardier-Dupas A, Camparo P, Capron F, Charlotte F. Splenic metastases: clinicopathologic presentation, differential diagnosis, and pathogenesis. *Arch Pathol Lab Med*. 2007;131(6):965-969. doi:10.5858/2007-131-965-SMCPDD
7.Paulson KG, Gupta D, Kim TS, et al. Age-Specific Incidence of Melanoma in the United States. *JAMA Dermatol*. 2020;156(1):57-64. doi:10.1001/jamadermatol.2019.3353
8.Meyer T, Merkel S, Goehl J, Hohenberger W. Surgical therapy for distant metastases of malignant melanoma. *Cancer*. 2000;89(9):1983-1991. doi:10.1002/1097-0142(20001101)89:9<1983::aid-cncr15>3.3.co;2-j
9.de Wilt JH, McCarthy WH, Thompson JF. Surgical treatment of splenic metastases in patients with melanoma. *J Am Coll Surg*. 2003;197(1):38-43. doi:10.1016/S1072-7515(03)00381-8
10.Trindade MR, Blaya R, Trindade EN. Melanoma metastasis to the spleen: Laparoscopic approach. *J Minim Access Surg*. 2009;5(1):17-19. doi:10.4103/0972-9941.51316
11.De Roeck L, Wuyts L, Peters B, Ruppert M. 5-Year survival after splenectomy in a patient with recurrent cutaneous melanoma: a case report. *Acta Chir Belg*. 2018;118(6):384-387. doi:10.1080/00015458.2017.1399661
12.Arun Kumar S, Ramasamy C, Syed MP, Agarwal A. Incidentally Detected Solitary Metastatic Melanoma of the Spleen Without Known Primary: A Case Report. *Cureus*. 2023;15(5):e38530. Published 2023 May 4. doi:10.7759/cureus.38530

© 2020 Christiana Care Health Services, Inc. ChristianaCare and its flower logo are trademarks or registered trademarks of Christiana Care Health System, Inc.