A CASE OF PARASITIC INFECTION IN PATIENT UNDERGOING STEM CELL TRANSPLANT

J. EDMUND M.D[1], L.THALIATH M.D[1] and R. RATHORE M.D[2]
1. Marshfield Clinic, Marshfield, Wisconsin, USA
2. Roger Williams Medical Centre, Providence, Rhode Island, USA

INTRODUCTION

- Parasitic infections in patients undergoing stem cell transplant are rare in developed countries [1]
- A patient with multiple myeloma -tandem autologous transplants - developed worsening diarrhea upon evaluation, was deemed secondary to a parasitic infection

CASE REPORT

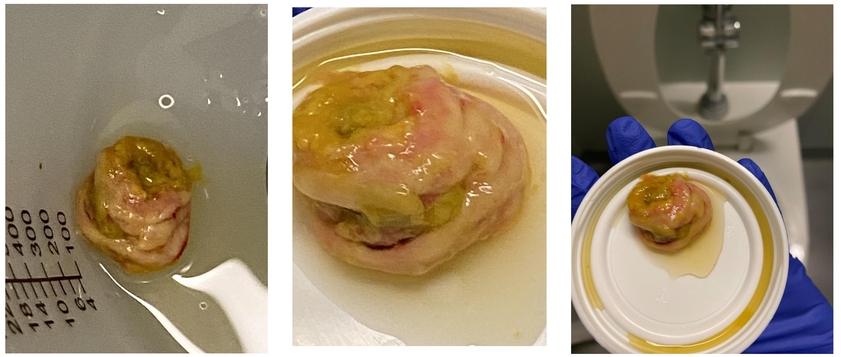
- 76-year-old man from Dominican Republic was diagnosed with smoldering myeloma in 2012
- Progressed into symptomatic myeloma requiring systemic chemotherapy
- Underwent his first autologous stem cell transplant in 2022.
- Hospital course complicated by diarrhea and neutropenic fever, resolved with antibiotics.
- Restaging bone marrow biopsy showed 10% residual plasma cells
- Underwent his second transplant in 2023.
- Developed neutropenic fever and diarrhea with unrevealing computed tomography (CT) imaging and blood cultures.
- The fevers and his symptoms improved after blood count recovery, and he was discharged.
- On Day 40 post-transplant, he was readmitted with profuse diarrhea (6–8/day) and fevers.
- CT imaging showed long-segment distal small bowel thickening with mucosal enhancement and submucosal edema and a small bowel 1.1-cm mass.

CASE REPORT

- Patient history of passing white cylindrical objects in his stools.
- A stool sent for ova and parasite evaluation came back as non-diagnostic.
- The patient had copious diarrhea, started him empirically on albendazole.
- Failure to diagnose the organism in the stool physically, the specimen was subjected to pathological examination.
- Pathological examination showed gelatinous cystic wall-like structure associated with necro-inflammatory structure with exudate was noted.
- The patient's diarrhea gradually improved with no other therapy and repeat imaging was normal

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IMAGES



Suspected parasite resembling ascaris lumbricodes, picture taken form the stool sample of patient

CONCLUSIONS

- Patient likely had a parasitic infestation
- The physical appearance resembled, Ascaris lumbricoides
- Failure to diagnose the parasite is probably secondary to the anti-helminthic medication started presumptively
- Luber *et al* mentions about a patient with Ascaris Lumbricodes after Allo-transplant [2]
- Immunocompromised patients such as those undergoing transplant, a detailed travel history and physical examination should be done to diagnose the cause of infection.

LEARNING POINTS

- Broader differential with early testing must be considered in patients undergoing transplant due to their weakened immunity

REFERENCES

1. Jarque I, Salavert M, Pemán J. Parasitic Infections in Hematopoietic Stem Cell Transplantation. Mediterr J Hematol Infect Dis. 2016;8(1):e2016035. Published 2016 Jul 1. doi:10.4084/MJHID.2016.035

REFERENCES

2. Luber V, Lutz M, Abele-Horn M, Einsele H, Grigoleit GU, Mielke S. Excretion of Ascaris lumbricoides following reduced-intensity allogeneic hematopoietic stem cell transplantation and consecutive treatment with mebendazole. Transpl Infect Dis. 2020;22(1):e13224. doi:10.1111/tid.13224

CONTACT INFORMATION

Liz Thaliath: Liz.Thaliath@marshfieldclinic.org