Reviewing the Risks of Medical Tourism: Atypical Mycobacterial Infections Associated with Cosmetic Procedures Abroad

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Purpose

To characterize the risk and type of atypical mycobacterial infections associated with various cosmetic procedures in the setting of medical tourism.

Introduction

- Cosmetic tourism involves individuals traveling to foreign countries to undergo elective aesthetic medical or surgical procedures, primarily due to cost considerations.[1]
- While the allure of reduced expenses draws individuals to this practice, concerns have arisen regarding the associated risks.[1]
- Of particular concern is the occurrence of atypical mycobacterial infections following cosmetic procedures performed abroad which are characterized by a range of non-tuberculous mycobacterial species and can lead to substantial morbidity and healthcare costs.[2]
- The objective of this review is to characterize atypical mycobacterial infections that are associated with cosmetic tourism, specifically in patients originating from the United States.
- By conducting this review, we aim to shed light on the incidence, causative organisms, treatment modalities, and geographical patterns associated with atypical mycobacterial infections in the context of cosmetic tourism.

Methods and Materials

- A review was conducted using PubMed and OVID Medline, and the following search terms were employed: "Medical Tourism," "Mycobacterium Infections," AND "Dermatologic Surgical Procedures OR Cosmetic Techniques."
- Studies were included in the analysis if they met the following criteria:
  - Patients originated in the United States.
  - Patients traveled to a foreign country for elective cosmetic procedures.
  - Patients were diagnosed with a post-procedural atypical mycobacterial infection. Patients traveling abroad for medically necessary procedures were excluded from this study.
- Data from the selected studies were extracted, including patient demographics, type of procedure, infecting mycobacterial organism, destination country, age, treatment strategies, and recovery times.
- The analysis was conducted by two independent reviewers.

Results

- A total of 22 studies were reviewed, with 10 meeting the inclusion/exclusion criteria.
- These studies collectively encompassed 41 patients, all of whom were female. The most frequently performed cosmetic procedures associated with infection included abdominoplasty (42%), simultaneous abdominoplasty and liposuction (20%), liposuction (17%), and breast augmentation (15%).
- Mycobacterium abscessus was the most common infecting organism, accounting for 78% of cases, followed by a Mycobacterium abscessus/Mycobacterium chelonae complex (16%) and Mycobacterium fortuitum (6%).
- The Dominican Republic was the most frequently associated destination country, implicated in 82% of cases, followed by India at 8%.
- Patients' ages ranged from 19 to 60, and treatment strategies predominantly involved aggressive debridement and antibiotic therapy.
- The average recovery time ranged from 2 to 22 months.

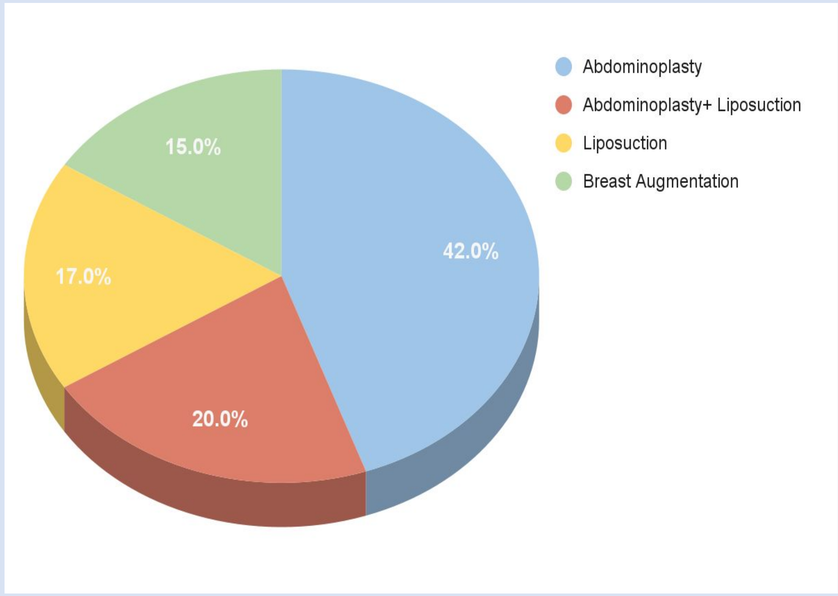

Fig 1. Frequency of cosmetic procedure type associated with post-procedural atypical mycobacterial infection

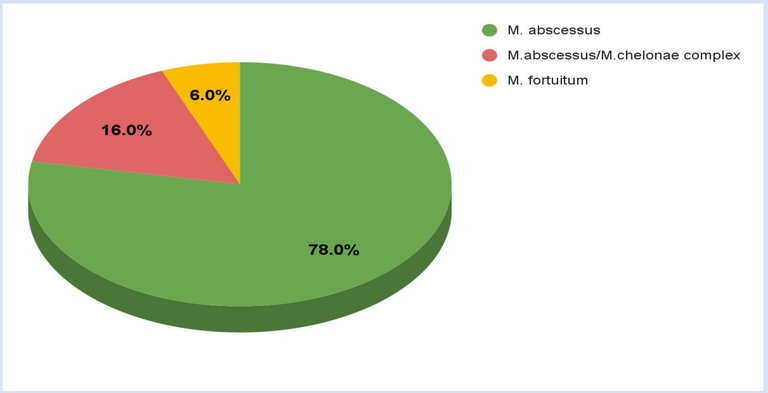

Fig 2. Frequency of atypical mycobacterial species acting as the primary infectious agent for the study population following an episode of cosmetic tourism.

Discussion

- Cosmetic tourism presents an array of cost-effective opportunities for elective aesthetic procedures, making it increasingly popular among patients seeking these services. However, the risk of atypical mycobacterial infections following cosmetic tourism is a growing concern.
- The high incidence of Mycobacterium abscessus infections, known for its resilience and resistance to conventional treatments, is particularly alarming.[3]
- Furthermore, the Dominican Republic and India emerged as the most frequently associated destination countries. Our intent is not to single out these regions, but to highlight the need for increased vigilance when considering cosmetic tourism to any region.
- The variability in recovery times, ranging from 2 to 22 months, underscores the significant impact of atypical mycobacterial infections on patients' lives and healthcare systems.
- The prolonged recovery times reflect the necessity of comprehensive management and the need for heightened awareness of the risks associated with cosmetic tourism.

Conclusions

Patients considering cosmetic tourism should exercise diligence when considering foreign clinics. Enhanced regulation and oversight of cosmetic procedures performed abroad are essential to mitigate the risk of post-procedural complications and improve patient safety in the context of cosmetic tourism. Further research is warranted to explore causes, preventive measures, and long-term outcomes associated with these infections.

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