STUDENTS' CORNER
LETTER TO THE EDITOR

The risk of infections in stem cell therapy: A growing concern

Rehab Bint e Tahir[1], Areeba Tahir Khan[2]

Dear Editor, In the exciting field of regenerative medicine, stem cell therapy emerges as a beacon of hope for treating conditions that currently lack effective medical treatment. However, the immunogenic nature of stem cell therapy necessitates the use of immunosuppressive drugs like CsA, FK506, or Rapamycin to reduce the chances of rejection by the body. These medications are often administered from weeks to years leaving the recipient prone to a considerable risk of infections.

Studies conducted on patients who have undergone stem cell therapy have reported infections as a common complication. A study[1] conducted by Waszczuk-Gajda A, et al in 2022 reported an incidence of 6.5 cases per 100 patient-years of early bacterial infection in patients receiving Autologous Stem Cell Transplantation for Multiple Myeloma. Another study by Cinicola BL, et al reported that 1.26% (95% CI 0.72, 1.93) of recipients of allogeneic hematopoietic stem cell transplant acquired non-tuberculous mycobacteria (NTM) infection, with a predominance in the adult population (82.9%) and a higher lung infection prevalence (44% of cases).[2]

Moreover, three individuals in three different Mexican cities developed extrapulmonary M. abscessus infections in 2022 after receiving injections of embryonic stem cells.[3]

Although stem cell therapy is still in its infancy in Pakistan, such high rates are a cause of concern, especially for a third world country like Pakistan that faces many deficits in the medical sector due to its socio-economic status. The focus needs to be shifted to prevention and early detection rather than just treatment alone. Physician education on proper infection prevention and management protocols in compliance with WHO and CDC guidelines along with further research on the modes of spread of infections through stem cell therapy is crucial in improving patient outcomes and post-procedural results.

In conclusion, while stem cell therapy holds promise, the risk of infections is a cause for concern that requires to be addressed with dedicated research and comprehensive clinical trials to maximize therapeutic benefits while safeguarding patient health.

[1]3rd Year MBBS Student, Hazrat Bari Imam Sarkar Medical and Dental College, Islamabad, Pakistan; [2]2nd Year MBBS Student, Khyber Medical College, Peshawar, Pakistan.
Correspondence: Rehab Bint e Tahir. e-mail: rehabtahir363@gmail.com
ORCID ID: 0009-0009-8840-7596

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