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Unexplained Increase in Incidence of T-Acute Lymphoblastic Leukemia/Lymphoma in Armenia

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INTRODUCTION

T-acute lymphoblastic leukemia/lymphoma (T-ALL/LBL) is a hematologic malignancy arising from immature T-cell precursors with an average annual incidence of 0.13 cases per 100,000 population for T-ALL (SEER database report).

AIM

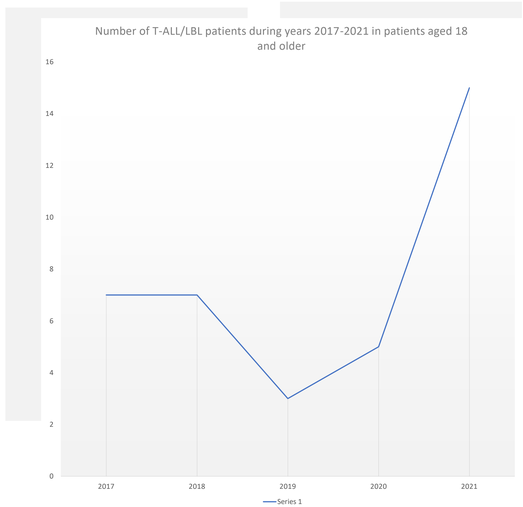
The aim of our study was to analyze the incidence of T-ALL/LBL in Armenia during the period of 2017-2021.

METHOD

We analyzed the medical records of all adult patients diagnosed with T-ALL/LBL from 01/01/2017 – 12/31/2021 at Hematology Center after Prof. R. Yeolyan, which is the only specialized institution in Armenia involved in the treatment of blood disorders, meaning the data are countrywide.

RESULTS

A total of 37 patients were diagnosed over the 5-year period. At diagnosis the median age was 40 years (18–67 years) and 56.7% (21) of the patients were male. In 2017 and 2018, 7 cases of T-ALL/LBL were reported annually (the annual incidence 0.31 and 0.3 per 100,000, respectively). This number decreased to 3 cases in 2019 (the annual incidence 0.1 per 100,000), but subsequently increased to 5 cases in 2020 (the annual incidence 0.22 per 100,000). Notably, the incidence of T-ALL/LBL significantly rose to 15 cases in 2021 (the annual incidence 0.7 per 100,000). It is important to highlight that there were no significant changes in the population of Armenia during the study period (2,852,000 in 2017 and 2,791,000 in 2021).



CONCLUSIONS

This analysis showed a significant increase in T-ALL/LBL incidence in 2021 compared with the preceding 4-year period. Potential factors, including the impact of COVID-19 infection, various stressors, and genetics should be thoroughly investigated to gain a deeper understanding of their potential role in the notable increase in T-ALL/LBL incidence.

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