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A comparison of the burden of leukemia amongst various regions of the world, 1990-2019

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Background: Acute Myeloid Leukemia (AML) is the most common acute leukemia in adults accounting for about 80% of adult leukemia cases. In contrast, it accounts for less than 10% of children less than ten years of age. In the last two decades, advances in the treatment of AML have greatly improved the prognosis of younger patients. However, there has been little progress for older AML patients. This study aims to describe the trends in incidence, mortality, and disability-adjusted life years (DALYs) from AML between 1990-2019 between global regions.

Methods: We extracted the data from the Global Burden of Disease Study database based on the International Classification of Diseases versions 10 and 9. Age-standardized incidence rates (ASIR), age-standardized mortality rates (ASMR), and DALYs stratified by sex were extracted for individual WHO regions for 1990-2019, and mortality-to-incidence indices (MII) were computed. All indices were reported per 100,000 population. Regions were divided into African, Americas, South-East Asia, European, Eastern Mediterranean, Western Pacific, as described by World Health Organization. Trends were compared using Joinpoint regression analysis.

Results: ASIRs increased globally (males +34.6%, females +7.9%) as well as in all regions, with the highest in the African region for males (+81.7%) and South-East Asia region for females (+22.31%). ASMR increased globally (males +11.7%, females +1.5%) as well as in all, with the highest in the African region for males (+17.1%) and South-East Asia region for females (+12.6%). However, for both genders, the MIIs decreased globally as well as in all regions. DALYs showed varying trends. It increased in males globally as well as all regions except the European region (-10.4%). Whereas in females, DALYs decreased globally and in all regions except the South East Asia region (+3.1%). In 2019, the Americas region had the highest ASIR (males 2.93, females 2.20) as well as ASMR (males 2.34, females 1.62).

Conclusions: Overall, incidence, as well as mortality of AML, is increasing globally for males and females. DALYs have also increased for males. Even though MII is improving globally and in all the world regions, the constantly increasing burden of the disease is concerning. Health policy and resources allocation to AML management needs immediate attention in all regions of the world.

Key words: End-stage constrictive pericarditis, stem cell therapy, amniotic membrane

Biography

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