

Cancer patients. Our intention is to develop technologies that provide clinically relevant drug combinations information to oncologists within a timeframe of 7 days. The development and validation of the screening pipeline will incorporate the first CSIR platforms for cancer translational research with respect to identifying effective cancer drugs.

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PP 13

AVASCULAR NECROSIS IN CHRONIC MYELOID LEUKEMIA: A REVIEW OF PATHOPHYSIOLOGY, PATIENTS' CHARACTERISTICS, AND CLINICAL OUTCOMES

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Objective: The exact incidence of avascular necrosis (AVN) in chronic myeloid leukemia (CML) is still unknown as the number of cases is limited. AVN was reported as an initial presenting manifestation in few CML patients. On the other hand, AVN was linked to medications used in CML treatment, specifically interferon-alpha (IFN- α) therapy and tyrosine kinase inhibitors (TKI). Our review aims to describe the pathophysiology, patients' clinical characteristics, and outcomes of AVN in CML. **Methodology:** We searched PubMed and Google Scholar for the case reports and series of patients with CML who developed AVN from inception to July 2021. We found 21 cases of AVN in CML patients, 17 cases with AVNFB, and four cases with ONJ. Articles in the grey literature and non-English language publications were excluded. Patient characteristics, hematological parameters, management, and outcomes of AVN were extracted from those articles. **Results:** The median age was 39 years with an almost equal distribution between males and females. WBC counts were strikingly elevated in patients who initially presented with AVNFB (above 10,000 in most cases). AVN related to CML management has been linked to TKIs and standard IFN- α therapies. Only 6 (out of 17) patients who developed AVNFB eventually required a hip replacement, and one (out of 17) developed a recurrent episode of AVNFB. All the reported cases of CML with ONJ were associated with TKIs. **Conclusion:** Given the lack of data, we could not conclude whether AVN has an adverse prognostic effect on CML. However, the overall prognosis is comparable with AVN associated with other conditions. Clinicians should consider AVN in CML patients with either hip or jaw pain because early detection and management are essential to decrease morbidity and long-term disability in such patients. A further prospective study with a larger sample size is needed to clarify the different aspects of AVN in CML patients.

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PP 14

SECONDARY CHRONIC MYELOID LEUKEMIA FOLLOWING RADIOACTIVE IODINE (I131)

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Objective: Radioactive iodine (RAI) with I131 has an established role in managing differentiated thyroid carcinoma, namely papillary thyroid carcinoma (PTC) and follicular thyroid carcinoma. However, concerns have been raised about its possible carcinogenic effects. Papers of t-CML following I131 are increasingly reported, and thus this review is dedicated to highlighting it. **Methodology:** All reports from the 1960s to date related to CML following RAI therapy were searched on Google Scholar and PubMed. Different search terms with Boolean function to search for the relevant articles. **Results:** We identified ten articles reporting 12 cases, as presented in table 1. We found that most of the reports were for men (8/12) under the age of 60 years (10/12), and the primary tumor was of PTC characteristics (5/12 were PTC, and 3/12 were mixed papillary-follicular carcinoma). The dose of I131 ranged between 30 millicuries (mCi) to 850 mCi; the mean dose was 331 mCi. Also, t-CML developed within the first ten years (9/12), mainly between 4-7 years post-exposure. **Conclusion:** A few reports found a statistically significant increased risk of leukemia following RAI therapy; some suggested a relative risk of 2.5 for I131 vs. no I131. Observed findings from these studies include a linear relationship between the cumulative dose of I131 and the risk of leukemia, doses higher than 100 mCi were associated with a greater risk of developing secondary leukemia, and most of the leukemias developed within the initial ten years of exposure.

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CHRONIC MYELOPROLIFERATIVE DISEASES

PP 15

CONCOMITANT LATENT POLYCYTHEMIA VERA AND MGUS.

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Objective: With the introduction of changes in the diagnostic criteria for polycythemia vera (PV) in the 2016 WHO classification, it became necessary to revise the diagnosis in some patients. Cases with latent (masked) polycythemia vera (LPV) were identified. Bone marrow trepanobiopsy takes one of the most important place in the differential diagnosis of LPV with other myeloproliferative diseases. We describe a case with coexistence of LPV and MGUS in a patient at the onset of the disease. **Case report:** Patient F.I., aged 62, was admitted with complaints of burning sensation in both feet, pain in the left lower extremity, back pain, nocturia 2-3 times per night and