

Incidence of Idiopathic Inflammatory Myopathies and Their Risk of Cancer in Leeds, UK: An 11-year Epidemiological Study

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Abstract : Objectives: The aims were to identify all incident adult cases of idiopathic inflammatory myopathies (IIMs) in the City of Leeds, UK, and to estimate the risk of cancer in IIMs as compared with the general population. Methods: Cases of IIMs were ascertained by review of all muscle biopsy reports from the Neuropathology Laboratory. A review of medical records was undertaken for each case to review the clinical diagnosis and collect epidemiological data such as age, ethnicity, sex, and comorbidities, including cancer. Leeds denominator population numbers were publicly obtainable. Results: Two hundred and six biopsy reports were identified, and after review, 50 incident cases were included in the study between June 2010 and January 2021. Out of the 50 cases, 27 were male, and 23 were female. The mean incidence rate of IIMs in Leeds throughout the study period was 7.42/1 000 000 person years. The proportion of IIMs cases with a confirmed malignancy was 22%. Compared to the general population, the relative risk of cancer was significantly greater in the IIMs population (31.56, $P < 0.01$). Conclusions: The incidence rate of IIMs in Leeds was consistent with data from previous literature, however, disagreement exists between different methods of IIMs case inclusion due to varying clinical criteria and definitions. IIMs are associated with increased risk of cancer however, the pathogenesis of this relationship still requires investigating. This study supports the practice of malignancy screening and long-term surveillance in patients with IIMs.

Keywords : idiopathic inflammatory myopathies, myositis, polymyositis, dermatomyositis, malignancy, epidemiology, incidence rate, relative risk

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