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Research paper 14

Determining factors associated with lymph node yield in colorectal cancer: a study in a specialized colorectal cancer centre in Sri Lanka

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Introduction and objectives: Lymph node yield (LNY) is crucial for treatment optimization and prognosis in colorectal cancer (CRC). This study aims to analyse the association between LNY and the factors related to tumour and patient characteristics in a cohort of Sri Lankan patients.

Methodology: 165 histopathology reports of CRC reported at the Department of Pathology, Faculty of Medicine, University of Kelaniya were analysed in a cross-sectional analytical study. The association between the LNY (dependent variable) and independent variables including age, sex, bowel length, location, tumour size, differentiation, lymphovascular invasion (LVI), T-classification and N-classification was determined using the Person's Chi-square test (significant level $p<0.05$).

Results: 98/165 (59.4%) were females. The median age was 64 years (IQR: 53-71). 87/165 (52.72%) and 52/165 (31.51%) were left and right colon tumours respectively. The mean LNY was 21(median 19) (right colon-24 and left colon–19). The results of the chi-square test were as follows; age>64 year ($p = 0.0082$), sex ($p = 0.5423$), bowel length>200mm ($p = 0.00003$), right-sided tumours ($p = 0.0352$), tumour size>48mm ($p = 0.0199$), tumour differentiation ($p = 0.8613$), LVI ($p = 0.4870$), T-stage ($p = 0.0038$) and N-stage ($p = 0.7716$)

Discussion and conclusions: There was a significant association between LNY and patient age, longer bowel length, right-sided location, larger tumour size and higher T-stage. The sex, differentiation and N-stage did not show a significant association. International guidelines have recommended an overall minimum number of lymph nodes to be retrieved in a CRC resection. However, it is necessary to consider the above factors when attempting to achieve this optimum number.

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