DOI: https://doi.org/10.4038/jdp.v18i2.7893 *Journal of Diagnostic Pathology 2023;18(2):22.*
Abstracts of Research Papers
Annual Academic Sessions 2023

Research paper 10

Tumour budding and its association with the TNM stage in neoadjuvant treated and untreated colorectal cancers

E.W. Kosgallana[1], S. Wijetunge[2], S.L. Malaviarachchi[3], G.S.S. Hegoda[2], I.V. Prematilleke[4]

[1]*Department of Anatomy, Faculty of Medicine, University of Peradeniya, Sri Lanka*
[2]*Department of Pathology, Faculty of Medicine, University of Peradeniya, Sri Lanka*
[3]*Department of Oncology, University Hospital, Plymouth NHS Trust, United Kingdom*
[4]*Department of Pathology/Centre for Cancer Research, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka*

Introduction and objectives: Tumour budding (TB) is recognised as an independent adverse prognostic factor in colorectal cancer (CRC). However, its significance after neoadjuvant treatment is still unclear. The aim of this study was to assess the association between TB and TNM stage in neoadjuvant-treated and untreated CRCs.

Methodology: The histology slides of neoadjuvant-treated and untreated CRC from four tertiary care centres were evaluated for PTB (peritumoral TB), ITB (intratumoral TB) and TNM stage. The presence of TB was assessed according to the International Tumour Budding Consensus Conference 2016 recommendations. Chi-square, Fisher's exact and rank biserial correlation statistical tests were used to assess the associations between PTB and ITB with TNM stage.

Results: Ninety-two CRCs were included in this study, and 27.17% (25/92) were neoadjuvant-treated tumours. TB was present in 56% (14/25) of treated and 73.13% (49/67) of untreated cases (p=0.116). In the untreated CRC, PTB showed a significant association with the increasing T stage (p=0.025) but not with the N stage (p=0.203) or M stage (p=0.392). ITB showed a significant relationship with the increasing N stage (p=0.036) but not with the T stage (p=0.288) or M stage (p=0.631) of the tumour. In the neoadjuvant-treated cases, PTB was not significantly associated with the T stage (p=0.197), N stage (p=0.952) or M stage (p=1.000). Similarly, ITB was not significantly associated with the T stage (p=0.778), N stage (p=0.456) or M stage (p=1.000).

Discussion and conclusion: In the neoadjuvant untreated CRCs, PTB was associated with the T stage and ITB with the N stage. In treated cases, neither PTB nor ITB was associated with the TNM stage. Neoadjuvant therapy may alter the predictive value of TB in CRC.

Keywords: colorectal cancer, neoadjuvant treatment, tumour budding

Acknowledgements: University Research Grants, University of Sri Jayewardenepura (ASP/01/RE/MED/2022/49) and University of Peradeniya (URG/2022/55/M, URG/2021/26/M).

Corresponding author: Prof. Isha Prematilleke
Department of Pathology,
Faculty of Medical Sciences,
University of Sri Jayewardenepura, Sri Lanka
ishaprem@sjp.ac.lk