Rijuneeta Gupta et al., J Otol Rhinol 2018, Volume 7
DOI: 10.4172/2324-8785-C3-014

Role of neutrophil lymphocyte ratio (NLR) as a predictor of disease severity in nasal polyposis (NP) and allergic fungal rhinosinusitis (AFRS)

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The lack of an effective marker to predict recurrences in NP and AFRS puts enormous financial burden on the society. Neutrophil Lymphocyte ratio (NLR) could be cost effective, easily reproducible biomarker to predict recurrences. We present a case control study that included 100 subjects. Disease severity was graded based on Lund Mackay CT and endoscopic scoring. Patients were given preoperative oral steroids for two weeks. The pretreatment neutrophil lymphocyte ratios were calculated from the differential leucocyte counts and compared with the diseases severity and postoperative values. Disease severity graded on Lund Mackay CT and endoscopic score in controls was 0.7 and 0.1 respectively. The CT severity score in patients with NP was 12.9 and changed to 1.2 ($p<0.01$). In AFRS the pretreatment CT score changed from 15.1 to 0.75 ($p<0.01$). The endoscopic severity score in NP pretreatment was 2.8, which decreased to 0.03 post treatment. In AFRS this endoscopic severity changed from 3.4 to 0.1 ($p<0.01$). Patients with NP had a mean pre-treatment NLR of 2.03±0.28, which reduced to 1.68±0.43 post treatment ($p<0.01$). NLR in AFRS changed from 2.15±0.62 to 1.78±0.36 post treatment ($p<0.01$). We conclude that NLR correlates to the disease severity and showed a linear correlation with the extent of the disease, which was not statistically significant. NLR can be used as a cost effective novel biomarker in remote areas to predict recurrences and keep track of treatment response.

Biography

Rijuneeta Gupta is currently Professor in the Department of Otolaryngology and HNS at the Post Graduate Institute of Medical Education and Research, Chandigarh, India.

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