

response was evaluated by means of frequency analysis ($p < 0.05$). A reactivity index (RI) was calculated as intensity (I) x percentage of positive area (A); RI values varied from 0–12; low (0–6) and high (7–12). Intensity, percentage of positive area, immunohistochemical pattern and RI were analyzed employing Chi-Square test and ANOVA ($p < 0.05$), after data standardization.

Results: Primary malignant samples expressed MUC2 in 52% of cases; MUC1, 94%; MUC5AC, 14%; CEA, 93%; beta-catenin, 98%; Lex, 74%; sLex, 66%; Ley, 91%; sLea, 90% and Tn, 41%. N+ expressed MUC2, 30%; MUC1, 89%; MUC5AC, 19%; CEA, 80%; beta-catenin, 83%; Lex, 69%; sLex, 72%; Ley, 75%; sLea, 86% while Tn, 44%. In general, CCR showed a higher RI than control samples. In patients with N+ with a low sLex RI presented a longer SFD than patients with a high sLex RI (40 vs 14 months) ($p = 0.07$). Although a significant difference was not found, patients which showed a primary tumour low Lex RI presented a longer SFD than patients with a high RI, (44 vs 26 months). A long OS was found in patients which primary tumours showed a low Lex RI (18 months). In N+ patients, Lex was also studied in lymphatic nodes, a low Lex RI correlated with a longer SFD than patients with a high Lex RI (24 vs. 18 months).

Conclusions: This study showed that, in CCR patients, carbohydrate antigenic expression may indicate a difference in SFD and OS.

313 Immunity to phytohemagglutinin in some NHL patients

I. Besu¹, A. Konic-Ristic², S. Jelic³, S. Matkovic³, I. Minic³, M. Djordjevic¹, Z. Juranic¹. ¹Institute of Oncology and Radiology, Experimental Oncology, Belgrade, Serbia, ²Institute for Medical Research, Department of Nutrition and Metabolism, Belgrade, Serbia, ³Institute of Oncology and Radiology of Serbia, Department of Medical Oncology, Belgrade, Serbia

Background: Non-Hodgkin lymphoma (NHL) represents heterogeneous group of diseases either B-, or T-cell origin. Immunity to food antigens is in the attention of modern medicine. Many articles reported data about immune reactions to proteins from strawberries, peanuts, elevated levels of IgA and IgG antibodies to native gluten sequences or to cow's milk proteins. In order to assess whether food antigens contribute to the imbalance of immune response in patients with lymphoma, the aim of this work was screening the sera of patients with (mostly) B cell NHL as well as of healthy people for their immunoreactivity to food constituent phytohemagglutinin (PHA).

Patients Material and Methods: Fifty-five patients with NHL (before therapy) and 25 healthy individuals were included in the study. Levels of serum IgA, IgG and IgM antibodies to PHA, isolated from *Phaseolus vulgaris* (red kidney bean) were determined by ELISA test.

Results: Data obtained by ELISA tests show that the existence of the enhanced immunoreactivity to PHA is not so frequently found in tested NHL patients. Higher than cut off anti-PHA IgA immunoreactivity was found in 14/52 NHL patients. Elevated anti-PHA IgG immunoreactivity was found in 2/55 NHL patients and enhanced anti-PHA IgM immunoreactivity was not found in examined 52 NHL patients.

Conclusion: These results call for the new research are there any clinical importance of elevated humoral immunity to PHA, for the small group of immunoreactive NHL patients, for the course of this very severe hematological disease.

314 The role of pre and post treatment evaluation of Immunoglobulin A in hypopharyngeal malignancies in southern India

R. Singh¹, D.R. Nayak¹, P. Hazarika¹, M. Hazarika¹, R. Balakrishnan¹. ¹Kasturba Medical College, ENT-Head and Neck Surgery, Manipal, India

Background: Head and neck is one of the most complicated regions of the body, and its cancers present a challenge in multidisciplinary and multimodality management.

Methods: Objectives of the study are to:

1. Compare Immunoglobulin A (IgA) levels pre- and post treatment and recognize its relationship to stage of disease, histopathological grading and determine if it could be used as a reliable indicator to assess the prognosis of the disease;
2. Assess if IgA levels have any relationship to total serum protein levels and haemoglobin.

A prospective study was conducted from 2006–2008. 27 cases of hypopharyngeal cancers were randomly selected. 27 controls were also randomly selected. All cases staged as per TNM system and were histologically proven cases. Cases were grouped according to age, sex, risk factors, total serum proteins, hemoglobin levels, subsite of tumour, stage of disease, histopathological grading and treatment modality. Pre-treatment blood sample was collected 1 week prior to treatment and post-treatment sample 6 months after treatment. The samples were assessed for IgA, Total Protein, albumin, globulin and Hb%. A special questionnaire was prepared to evaluate the cases. The patients were subjected to 3 different treatment modalities: Surgery, RT and combined modality, and their results were also compared. ANOVA test was used to assess 'p' value.

Results: Mean age group of cases was 56.8 yrs. 59% cases were in 41–60 yrs group. Male:Female 4:1. 85% had history of risk factors; of which smoking was the commonest seen in 70% cases. A significant increase in serum IgA was observed in patients with low total serum protein and hemoglobin levels ($p < 0.05$). Serum IgA level was evaluated in both cases and controls, and a statistically significant increase in IgA level was found among cases (64%, $p < 0.01$). As stage of disease progressed there was progressive rise in levels of IgA being highest for stage IV disease. A comparison of treatment modality in stage III and stage IV showed that combined modality is a better option to radiotherapy alone.

Conclusions: In India, hypopharyngeal cancers are common in male due to the associated risk factors. Age groups commonly affected is above 40. A significantly high level of IgA was observed in these patients; which proves it's a definite but delicate indicator in the evaluation of hypopharyngeal cancers. Increased levels of IgA in anemic and malnourished patients indicates that presence of anemia and malnutrition can affect the treatment and prognosis of patients. Significantly increased levels of IgA are seen in patients with stage IV disease and poorly differentiated type of squamous cell carcinomas. The difference in the increase in the serum immunoglobulin level as the stage and differentiation of the tumour progresses can be used as a prognostic tool. Persistently high serum IgA levels even after treatment indicate residual or recurrence of tumour hence needs a close follow up. Comparison of pre- and post-treatment IgA levels suggests that combined modality of treatment is ideal for stage III&IV disease.