INTRODUCTION
Tobacco usage is the leading preventable public health problems and despite of many efforts still people are into this habit. Though harmful effect of smoking on human body is well established but sadly many of the people are using tobacco in smokeless form or smoking form. Smokeless form comprised of zarda, chaini khaini, pan masala, pan pasand and mishri etc. Smoking form comprised of cigarette, bidi, hookah, hookli etc. 1

The most common side effect of tobacco on oral cavity is the formation of pre-cancerous lesions and conditions. Pre-cancerous lesions are defined as morphologically altered tissue in which cancer is most likely to develop than its apparently normal counterpart. Pre-cancerous conditions are defined as generalized state of body associated with significantly increased risk of cancer. 2 Leukoplakia, erythroplakia and palatal changes associated with reverse smoking are examples of pre-cancerous lesions and systematic lupus erythematosus, oral syphilis, oral lichen planus, sideropenic dysphagia, xeroderma pigmentosum, epidermolysis bullosa etc. are examples of Pre-cancerous conditions. 3-4

Not only these, even tobacco’s effects can be seen on general body as respiratory system, and cardiovascular systems are commonly affected with smoking. Lung cancer and nasopharyngeal cancer are also result of tobacco usage. Immunoglobulins are raised in smokers and gutka chewers. Among five classes, IgA and IgG show significant increase in count. 5 The present study was conducted in order to estimate the immunoglobulins in smokers.

MATERIALS & METHODS
The present study was conducted in the department of Oral pathology and microbiology among 80 subjects who were registered at OPD of dental college. They all were informed regarding the objective of the study and written consent was obtained. Ethical clearance was obtained from institutional ethical committee prior to the study. Subjects with history of smoking were included and patients below age of 18 years and with any systemic illness were excluded. Subjects were divided into 2 groups. Group A (smokers) and group B(non-smokers). For serum immunoglobulins estimation about 2.5 ml blood was collected from antecubital vein in all subjects. Separated serum was collected in separate container and serum level of IgG and IgA was estimated by automated Nephelometry method. A statistical analysis was performed by independent t test and significant level of p value was set at 0.05.

RESULTS
In the present study demographic data was seen through table 1 and it was seen that studied population consist of 50 male ad 30 females with majority of the age group is 31-40 years. In table 2, its seen that IgG level is more in smokers as compared to non-smokers which is highly
significant.

### Table 1. Distribution of subjects among studied population according to age and gender

<table>
<thead>
<tr>
<th>Age group</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30 years</td>
<td>13</td>
</tr>
<tr>
<td>31-40 years</td>
<td>33</td>
</tr>
<tr>
<td>41-50 years</td>
<td>21</td>
</tr>
<tr>
<td>51 and more</td>
<td>13</td>
</tr>
</tbody>
</table>

### Table 2. Estimation of IgG level in groups (* signifies significant observations)

<table>
<thead>
<tr>
<th>Group</th>
<th>IgG level Mean ± SD</th>
<th>t value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>11.34 ± 2.47</td>
<td>1.095</td>
<td>0.001*</td>
</tr>
<tr>
<td>Group B</td>
<td>5.89 ± 0.589</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It has been shown that in smokers there is irritation of respiratory and gastrointestinal mucosa by cigarette smoke. Since IgA is associated with seromucous membranes, it protects these membranes against soluble antigens by inhibiting their adherence to surface of mucosal cells. Hence the presence of tobacco smoke on these membranes results in enhanced production of this immunoglobulin. It may be suggested that continuous exposure to components of cigarette has stimulatory effects on immunoglobulin production, thus the increased levels of immunoglobulins. The raised levels of IgG in smokers might be one of the mechanisms to neutralize components of cigarette tobacco via complement activation.6,8,9

### CONCLUSION

The raised level of IgG among smokers as compared to control increases the possibility of detecting the lesions at early stages. Thus the subjects with habit of smoking should be routinely assessed for IgG level. Dentists should be aware about this preventive approach along with other interventional strategies among smokers for quitting of habit.

### REFERENCES

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