INTRODUCTION
Cell reproduction is precisely regulated, so the production of new cells compensates exactly the loss of cells in a death. The final event ending at the beginning of first event of next cycle. Tumor cell kinetics can be identified by measuring the growth fraction (no. of cycling cells) with the help of a number of methods like Titrated thymidine, S phase fraction, quantification of proliferation associated antigen like PCNA or Ki67. The only way to assess the cycle speed in situ on paraffin embedded material consists of quantifying AgNORs. AgNORs (Nucleolar Organizing Regions) are loops of DNA transcribed to ribosomal RNA which contribute to regulation of protein synthesis and therefore it follows that the number of AgNORs in each nucleus reflects cellular activity.
Squamous cell carcinoma of the upper aero digestive tract is one of the commonest types of carcinoma affecting Indians. In recent decades, we have seen a dramatic switch from histopathology to molecular methods of disease diagnosis changes occur at the molecular level before they are seen under the microscope and before clinical changes occur.

AgNOR staining and scoring is simple, inexpensive and useful adjunct to routine histopathology to evaluate lesions, especially because of high sensitivity and cost effectiveness.

MATERIALS AND METHODS
The present study consists of 125 cases of biopsy from upper aero digestive tract. The patients were admitted in our tertiary care hospital Government Hospital affiliated to Government College. Patients presented with wide age range of 40-60 years having chief complaints of ulceration, pain, difficulty in opening mouth, foul smell from mouth. The histopathological material consist of Biopsy from suspected areas or mass. The material was fixed in 10% formalin and subjected to staining by Haematoxylin and Eosin and AgNOR stain. AgNOR staining was carried out by the method described by Ploton et al with a few modifications. Finally AgNORs were counted in 100 nuclei under oil immersion (100x) and the mean of them calculated. The AgNOR in the nucleoli were counted as one dot and those dispersed throughout nucleus as separate AgNORs.

RESULTS
Table 1: Prevalence of lesions gender wise

<table>
<thead>
<tr>
<th>S.No</th>
<th>Lesion</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>normal</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>malignant</td>
<td>77</td>
<td>10</td>
</tr>
</tbody>
</table>
Prevalence of lesions is more in male as compared to female.

Table 2: Comparison of mean AGNOR counts between normal and malignant lesion

<table>
<thead>
<tr>
<th>S.No</th>
<th>Lesion</th>
<th>Mean±Sd</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Normal</td>
<td>1.77±0.01</td>
<td>0.0001</td>
</tr>
<tr>
<td>2</td>
<td>wd-scc</td>
<td>4.33±0.23</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>md-scc</td>
<td>5.79±0.33</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>pd-scc</td>
<td>8.41±0.28</td>
<td></td>
</tr>
</tbody>
</table>

After comparing both the lesions, p value is highly significant.

**DISCUSSION**

Over the last decade, silver staining of AGNORs has become a widely used alternative method for assessing proliferative activity and grade of malignancy in tumour pathology. The counting method of Crocker et al. was followed Total nucleus, extra nucleolar AGNOR dots were counted and silver stained nucleolus was counted as one dot.

Sandhya Panjeta et al. it was found that the lesions were divided into normal, leukoplakia, dysplasia and malignancy; the mean AGNOR count of carcinoma was significantly higher than the normal epithelium, leukoplakia and dysplasia (p<0.05)

Sushma Mehkri et al. the mean AGNOR count was higher in cases of oral squamous cell carcinoma with well and moderate differentiation as compared to cases of oral leukoplakia and dysplasia with a statistically significantly difference (p<0.0001) indicating a high proliferative activity in former cases.

Elangovan et al. found that the maximum significance was seen in case of inflammatory and malignant lesions differ from normal mucosa with a value of (p<0.0001).

Surgeon v manu et al. the mean AGNOR counts between normal, benign and malignant lesions and between various grades of squamous cell carcinoma, was statistically significant with the p value of (<0.05).

Though the AGNOR technique has its own limitations, it is simple, inexpensive procedure and helps in distinguishing between normal, premalignant and malignant lesions, predicting high risk cases and can therefore serve as a useful adjunct to routine histopathological examination of upper aero digestive lesions.

**CONCLUSION**

Immunohistochemistry, tumour markers which can aid the pathologist in diagnosis of the lesion but these methods are expensive. AGNOR count on the other hand is a simple cheap method which can act as an additional diagnostic tool in tumour histopathology. The number of AGNOR increases gradually from the normal epithelial lining to premalignant and malignant lesions of upper aero digestive tract. AGNOR are small, round, regular and few in normal lesions, they increase in number in premalignant lesions while they are large, increased in number and often clumped in malignant lesions.
REFERENCES
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