1. A 50-year-old male, chronic bidi smoker presented with a white patch on commissure of lip.

Question: What could be the diagnosis?
- Keratosis
- Angular chelitis
- Lichen planus
- Oral candidiasis
(For answer see next page)

2. 55-year-old man was referred for the evaluation of growth involving the left buccal mucosa and the angle of mouth. He chewed tobacco at least 4 times every day for last 10 years. The lesion started as a small white patch and progressed to present dimensions in 2 years. Clinical examination revealed a proliferative growth on left buccal mucosa reaching up to the angle of mouth. The 3 x 2.5 whitish lesion was warty, had well-defined margins and showed little induration in the submucosa. Careful examination of the neck did not reveal any adenopathy. Two successive biopsies showed only hyperkeratosis and hyperplasia with no evidence of malignancy.

Question: What is the diagnosis?
- Mucosal wart
- Leukoplakia
- Tobacco pouch keratosis
- Verrucous carcinoma
(For answer see next page)
ANSWERS OF IMAGE QUIZ

1. **Answer:** Keratosis

*Explanation:* Keratosis of the commissure of the lip is classically seen in chronic bidi smokers. It is characterized by a raised white patch on the labial commissure. Ulcerated and nodular forms are also seen. Bilateral commissural involvement is not unusual and noted in 12 to 33%. It is a premalignant condition.

A baseline biopsy is reasonable to establish a diagnosis and to assess for dysplasia. Histopathological examination demonstrates hyperkeratosis and parakeratosis with or without epithelial dysplasia of varied degree. Atypical cytological changes are minimal with mild dysplasia, but more pronounced in moderate and severe dysplasia, and include altered nuclear cytoplasmic ratio, dyskeratosis, basal layer hyperchromatism and atypical mitotic forms. Lesions may regress on cessation of smoking.

A “wait and watch policy” may be employed for lesions with no or mild dysplasia. Lesions with moderate to severe dysplasia need surgical excision. Carbon dioxide laser excision and cryotherapy ablation have also been employed for the treatment of extensive lesions. However, despite adequate treatment, lesions may recur. Thus, early detection, appropriate counseling, and careful long-term follow-up are needed.

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2. **Answer:** Verrucous carcinoma

*Explanation:* Verrucous carcinoma is a clinical diagnosis based on the typical morphological presentation of the lesion as shown in the picture. Very often, verrucous carcinoma is a minimally invasive well-differentiated oral squamous cell carcinoma. It is also known as Ackerman’s tumor. The term “Verrucous” is used because of its fine, finger like surface projections. It is commonly seen with chronic use of smokeless tobacco, although it has also been reported amongst non users. This tumor is most common in older men and generally occurs on the buccal mucosa, the maxillary/mandibular vestibule of the alveolar gingival that correspond to the site of tobacco placement. The lesion is usually a whitish warty growth with papillary surface. It is slow growing, exophytic, and well-differentiated, and associated with a much better prognosis than conventional squamous cell carcinoma of the mouth. Treatment usually consists of wide surgical excision. Regional lymph node metastasis is less common and distant metastasis has not been reported. Local recurrences may develop that may require re-excision. The cell kinetics of verrucous carcinoma are distinctive, containing a thick zone of non-proliferating, non keratinizing cells between the basal germinative layer of normal squamous mucosa, lacking the S-phase cells. Pathologists need to demonstrate invasion of the basement membrane to exclude carcinoma which is not possible in a routine punch biopsy. A generous knife biopsy with a care to include the base of the tumor is essential to obtain a preoperative diagnosis of malignancy. A wide excision of the lesion with adequate margins can be attempted even in the absence of a biopsy in case the surgery is not morbid. There is virtually no role of radiotherapy in the primary treatment of these lesions. However, if the final histopathology shows invasive cancer with poor prognostic markers, adjuvant radiotherapy may be indicated. This patient underwent a wide-excision taking 5 mm mucosal margins under general anesthesia. The postoperative histopathological examination revealed features of verrucous carcinoma depicting swollen and voluminous rete pegs extending into deeper tissues lacking cytological atypia. Occasional mitotic figures were present. This patient is on 3-monthly follow-up for the last one year.

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