Laryngopharyngeal tumors can be a challenge for clinicians to diagnose. Correctly identifying such lesions based on fiber optic visualization can be limited by the quality of the examination and the examiner's experience with the fiber optic examination. Ultimately, an adequate pathologic biopsy must be obtained to demonstrate the type/morphology of the cells within the lesion, and the depth of invasion. The involvement of deeper levels may determine a different diagnosis and prognosis for patients especially for premalignant and malignant lesions.

Improved scope technology with side port capability (Fig 1.2) has given us the option of obtaining tissue from laryngopharyngeal lesions for pathology during an outpatient office visit with topical anesthesia. Traditionally, these patients would require a visit to the operating room (OR). Benefits of office biopsy include: (1) avoiding the risk of general anesthetic (2) receiving a quicker diagnosis with a shorter procedure (3) accessing lesions in patients who would have limited exposure in the OR (4) avoiding the costs of anesthesia and OR fees.

The advantages of an OR biopsy include a more detailed examination of the extent of the tumor with larger and deeper biopsy capabilities. More importantly, operative direct laryngoscopy gives the surgeon and patient the option for definitive treatment by excision for many lesions. The two goals of this study are to determine the diagnostic value of office biopsies based on the pathology obtained when compared to OR biopsy, and to investigate which lesions may benefit from surgical intervention regardless of office biopsy findings.

METHODS AND MATERIALS

Patients from the practice of the senior author (KA) who underwent operative biopsy under general anesthesia after initial biopsy performed in the office from May of 2010 to 2011 were reviewed. Patients who did not complete definitive treatment for their lesion as defined by excision, observation, or radiation therapy were excluded.

To assess the accuracy and diagnostic value of office biopsies, the pathology reports of the office biopsy and corresponding operative biopsy were reviewed and directly compared for each patient. Biopsies were further classified as either "dysplasia" or "no dysplasia". "Dysplasia" biopsies were from lesions that demonstrated any level of dysplasia, carcinoma-in-situ, or squamous cell carcinoma. "No dysplasia" biopsies were from lesions that did not demonstrate any level of dysplasia. The pathologies were then again compared for each patient using these two classifications to identify the accuracy of office biopsy in determining dysplastic lesions.

To recognize which lesions within our cohort ultimately required operative management, the treatment courses for each patient were observed. The treatment courses are outlined in Table 1.

INTRODUCTION

RESULTS

Thirty-one patients were included in our study. The average age of this cohort was 64 years old with a male to female ratio of 20:11. 16/31 (52%) of the office biopsy specimens were directed diagnostic matches to the surgical pathology (Table 1). Of these sixteen, six (38%) were identified as papilloma. The remaining fifteen patients of our cohort had histologic diagnoses that were different than previous office biopsy. Eight of these fifteen patients had office biopsies that revealed dysplasia, but operative biopsy diagnosis of invasive squamous cell carcinoma.

Our study did show that the office biopsy's ability to accurately identify dysplasia in lesions was very good. The office biopsy correctly identified all (16/16) lesions with "dysplasia" and all (15/15) lesions with "no dysplasia." The treatment course for each patient is demonstrated in Table 1. Twenty-three (74%) of the patients who underwent operative management had complete excision of the lesion at that time. The remaining eight patients had a biopsy to either obtain or confirm the diagnosis of the lesion. Of these eight patients, six of them had a diagnosis of dysplasia of some severity based on office biopsy. However operative biopsy revealed invasive squamous cell carcinoma, and the patients proceeded to external beam radiation therapy for their treatment.

DISCUSSION

Our study has shown that only fifty-two percent of our patients received the same diagnosis from the office and OR biopsy. The inadequate depth of an office biopsy past the basement membrane is a known disadvantage to this technique when determining pathology. The eight patients who received the diagnosis of only dysplasia based on office biopsy, whose lesions were diagnosed as invasive squamous cell carcinoma in the OR demonstrate this importance.

We propose that office biopsy is very good at identifying any signs of dysplasia within a laryngopharyngeal lesion. Sixteen of the sixteen patients with dysplastic lesions were correctly identified by office biopsy, and fifteen of the fifteen patients with non-dysplastic lesions were also correctly identified. We further recommend that the diagnostic value of an office biopsy when viewed as a cytological diagnosis and not as a histologic diagnosis is extremely accurate and comparable to other means of cytological diagnosis such as fine needle aspiration of parotid masses.

Seventy-four percent of our cohort received definitive excision of their lesions during the OR visit. In our study, this practice was common with pre-malignant, malignant, and papillomatous lesions. When undergoing surgical intervention to either excise the lesion or confirm pathologic diagnosis after office biopsy, the benefit of bypassing the risks of general anesthesia is clearly negated. The advantage of complete excision of the lesion during an operative visit with general anesthesia is an important benefit of taking these patients to the operating room.

CONCLUSIONS

Our study shows that office biopsy is limited in making a histopathological diagnosis. In our study, 52% correlate with surgical pathology. However, it was shown to be 100% accurate when detecting dysplasia. This may dictate definitive treatment in a cohort of patients who cannot undergo definitive management.

Our study also demonstrates that patients should be identified who would likely require surgical intervention based on clinical history and exam, therefore negating many of the benefits of an office biopsy. In many ways, office biopsy provides the same diagnostic insight as other cytological interventions such as fine needle aspiration of head and neck masses and can play an important role when used properly.

REFERENCES