INTRODUCTION

Recurrent Respiratory Papillomatosis (RRP) is a rare disease characterized by benign exophytic growths that have a tropism for the larynx, but may also spread distally into the lungs. The papillomas are caused by the Human Papilloma Virus (HPV) most often types 6 or 11. This disease demonstrates a bimodal distribution with onset during pediatric years or during adult years. The mainstay treatment for this condition is surgical resection of growths. Difficulty arises in treating patients with this disease because of its propensity to recur after surgical resection and the possibility of distal spread. This has led to the search for effective adjuvant therapies. Cidofovir, an antiviral agent, is currently being used off-label as adjuvant therapy in RRP. Previous studies have demonstrated efficacy for this off-label use, specifically intralesional injections.  

MATERIALS AND METHODS

STUDY DESIGN: Chart review of 21 adult patients over 14 years

- Adult patients with recurrent respiratory papillomatosis were treated at a academic teaching hospital.
- All papillomatous lesions were resected using a microdebrider technique.
- In some patients the surgical beds were then injected with cidofovir.

Cidofovir

- Cytosine analog approved by FDA for treatment of cytomegalovirus (CMV) retinitis in HIV patients
- Currently being utilized as an off-label adjuvant treatment in patients with recurrent respiratory papillomatosis
- All patients were informed of the off labeled use of cidofovir and the potential unknown for inducing dysplasia
- Informed consent was obtained from all patients receiving cidofovir
- The concentration varied from 15mg/ml to 30mg/ml
- Injection was performed using a 25 ga butterfly held with a laryngeal alligator forcep
- Injections were performed into the superficial tissue of the surgical resection sites

Two groups of patients are presented

- The first group was initially treated with surgical resection with or without Cidofovir injection and in subsequent procedures underwent resection with injection of Cidofovir.
- The second group only received surgical resection without injection of Cidofovir.
- The interval between surgeries was determined for each patient.
- The effect of cidofovir to lengthen the interval between surgeries was noted

RESULTS

15 patients who received Cidofovir Injection

- 15 patients received cidofovir at the time of surgical resection
- 6 patients did not receive cidofovir at the time of surgical resection
- One patient who did not receive cidofovir did complete adjuvant interferon therapy
- Two patients had lesions that underwent malignant transformation (One patient received the first and only Cidofovir injection at the time malignancy was identified. The second patient’s malignancy was identified following 2 Cidofovir injections.)
- 6/13 (46%) patients who received Cidofovir are free of disease

DISCUSSION

The treatment for RRP has primarily been surgical resection. The CO2 laser was a primary modality for years but the microdebrider has been shown to be easier to use, with decreased cost, and better functional results. Adjuvant therapies such as DMI, acyclovir, and interferon have failed to have dramatic results for the majority of patients. Cidofovir has been added to the armamentarium over the last 8 years. The treatment protocols for the use of Cidofovir have varied in their interval, concentration, and whether to inject the surgical bed or the papillomatous lesions. This paper presents a group of patients who only received Cidofovir injections at the time of surgical resection. The lesions were removed using a microdebrider and then the surgical bed was injected with a high concentration of Cidofovir. The results suggest that this technique is successful in eliminating RRP in some but not all patients. Patients in this study who did not receive Cidofovir continued to have active recurrent disease.

CONCLUSIONS

- This patient group demonstrates the efficacy of injecting cidofovir in the surgical bed as adjuvant therapy at the time of surgical resection for AORRP
- This treatment protocol is comparable to an intralental injection treatment technique

WORKS REFERENCED


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