

RECURRENT RESPIRATORY PAPILLOMATOSIS: MANAGEMENT OUTCOME AT NATIONAL EAR CARE CENTRE, KADUNA

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INTRODUCTION

Recurrent respiratory papillomas (RRP) are rare benign, indolent aerodigestive tract tumors, commonly found in the larynx and caused primarily by human papilloma viruses (HPV) types 6 and 11. Though benign, it is often characterized by multiple recurrences and it is the most common benign neoplasm in children¹. Endoscopic removal and some adjuvant remains the mainstay of treatment with no effective therapy². It presents with hoarseness, and breathing may be impaired leading to severe morbidity or mortality. It may also undergo malignant transformation culminating into dire consequences.³ Stridor is second to hoarseness at presentation which is initially inspiratory and then biphasic. Other symptoms such as chronic cough, pneumonia, failure to thrive, dyspnea, dysphagia or acute respiratory distress are relatively less frequent.⁴

Repeated surgical debulking as may be required in frequent recurrences may lead to irreversible voice and airway impairment. This necessitated the use of several adjuvants such as oral indole-3-carbinol⁵, intralesional cidofovir injections⁶ and lymphoblastoid interferon⁷ and many others in an effort to reduce the rate of recurrence. Surgical excision is principally aimed at reducing the burden of the papillomata, establishing adequate and safe airway, achieving improved voice quality and decreasing recurrence. These can be achieved if LASER excision is done under microlaryngoscopy technique. Microdebrider can also be used under such a setting. The microdebrider allows for easy excision of papillomata using cut and suck mechanisms. Suctioning of the cut tissue facilitates removal and improves visualization of the operation site by the surgeon.

Recurrent Respiratory Papillomatosis (RRP) is classified into two based on age at presentation. Those that present commonly in children younger than 5 years are referred to as juvenile-onset (JORRP). The adult-onset (AORRP) usually

ABSTRACT

Background: Recurrent respiratory papilloma (RRP) is a benign but potentially devastating disease of viral origin. It may lead to serious morbidity or mortality with great management challenges. Endoscopic LASER excision with or without adjuvant therapy remains the gold standard in treatment. This is usually not available in health facilities of developing countries like Nigeria.

Methodology: A 6 year retrospective review of cases of recurrent respiratory papillomatosis (RRP) with confirmed histology seen at national ear care centre, Kaduna, Nigeria.

Results: A total of 22 cases were reviewed, age ranged from 8 months to 30 years, mean age of 10 years with M: F ratio of 1.2:1.0. About 68% were under 10 years of age and all presented with hoarseness (100%) followed by dyspnoea (45.5%). All had simple conventional rigid laryngoscopy and excision without any adjuvant. Three (13.6%) presented with recurrence within one year. None had tracheostomy.

Conclusion: Conventional surgery for recurrent respiratory papillomatosis where the main stay of treatment (endoscopic LASER excision) is not available especially in developing countries is effective. Early diagnosis is desirable in order to eliminate the possible added morbidity by tracheostomy which may be necessitated by severe airway compromise.

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manifest in the fourth decade of life. JORRP is more common and more aggressive than AORRP.⁸

We present a six year review of our management outcome of patients with RRP in Kaduna, north western Nigeria.

Methodology

This is a review of management outcome of patients managed for RRP over six years between January, 2003 and December, 2008 in national ear care centre, Kaduna, Nigeria. Medical records of patients seen with RRP during the period under review and had histologically confirmed diagnosis were retrieved; the biodata and other parameters like treatment modality (treatment offered in this case conventional rigid direct laryngoscopy and excision) and outcome were extracted. The outcomes were essentially the

events that happened post-operatively such as recurrence, repeat surgeries and complications. Data collected were analyzed using simple statistical methods and presented in descriptive formats.

Results

A total of 22(100.0%) patients were seen and treated for recurrent respiratory papillomatosis (RRP) during the period under review. Age ranged between 8months and 30years with a mean of 10years. Of the 22 patients, 12 (54.55%) were males and 10 (45.45%) were females with a male: female ratio of 1.2:1.0. Those under 5years were the worst affected 36.4% (table 1). A total of 15 (68.2%) were under 10years of age. All patients 22 (100%) had hoarseness as their principal complaints. About 46% presented with difficulty in breathing as detailed on (table 2).

About 64% presented with a year or less history of hoarseness while 1 came with more than 7years history (table 3). Most of the patients presented with more than one symptom.

All our patients had simple conventional rigid direct laryngoscopy and excision being the only treatment modality available to us. Three (13.6%) had recurrence within one year and they had a repeat

Table 1: Distribution of patients by age

Age group in years	Number of patients (%)
0-4	8(36.4)
5-9	7(31.8)
10-14	3(13.6)
15-19	0(0)
20-24	2(9.1)
25-29	2(9.1)
Total	22(100)

Table 2: Distribution of features at presentation

Symptoms	Number of Patients (%)
Hoarseness	22(100)
Difficulty in breathing	10(45.5)
Stridor	4(18.2)
Cough	4(18.2)
Dysphagia	2(9.1)

Table 3: Duration of hoarseness at presentation

Duration in years	Number of patients (%)
0-1	14(63.7)
2-3	4(18.2)
4-5	2(9.1)
6-7	1(4.5)
>7	1(4.5)
Total	22(100)

surgery. None of our patients had tracheostomy. The commonest site of lesion was the vocal cords seen in 15 (68.2%) patients and anterior commissure in 7 (31.8%).

Discussion

Recurrent respiratory papillomatosis (RRP) has been reported to be the most common benign tumor of the larynx in children⁹. There has been renewed interest in research into the disease over the past several years. As a result newer treatment options which appear to be promising are emerging. This may lead to better understanding and probably better way of controlling this benign but tasking disease. Though a benign neoplasm, it may give rise to serious morbidity with devastating outcome and significant management challenges or may lead to mortality.

Common presenting features are hoarseness and airway obstruction. In this study all our patients presented with hoarseness followed by difficulty in breathing in 10 (45.5%) patients. This agrees with the findings of a similar study in Jos³, the relatively low number of patients with dyspnoea may be due to relatively early presentation of our patients. No patient had tracheostomy, this was achieved because of prompt attention given to patients presenting with eminent airway obstruction since the centre is an Ear, Nose and Throat centre. The policy of the centre in the treatment of RRP was that patients' who have only hoarseness and some symptoms other than eminent airway compromise were scheduled for surgery as elective. On the other hand those with airway obstruction were handled as emergencies depending on the degree of obstruction. This was an attempt to avoid tracheotomy as much as

possible. It is believed that tracheotomy predisposes to spread of the papilloma to the trachea, into bronchi and the lungs.

The incidence is highest among under 5years (36.4%). Total under 10years is 15 (68.2%), this concur with studies conducted in Jos and Ibadan, Nigeria previously^{3, 10}. About 64% of the patients presented with less than a year history of hoarseness followed by less than 3years (18.2%) with only a patient (4.5%) presenting with over 7years history. Most of these patients are delayed by health care providers in peripheral hospital and other primary health care facilities where they are being managed for asthma. The vocal cords and anterior commissure were the commonest sites of recurrent respiratory papillomatosis 68.2% and 31.8% respectively. All patients had simple conventional direct rigid laryngoscopy and excision, 3 (13.6%) came with recurrence within one year. This is relatively higher than the findings of Adoga³ at Jos because of the sample size. It is however lower than other reports^{10, 11}. No post operative complication was seen in our series; inspite of the fact that glottic webs¹² and airway stenosis¹³ are some of the commonly reported complications.

The greatest challenges of the management of recurrent respiratory papillomatosis are recurrence, post operative complications and lack of effective medical therapy. These challenges are more in a resource constrained areas where the gold standard of treatment i.e endoscopic LASER excision does not exist and adjuvant therapeutics like interferon not easily accessible. However, our study shows that simple conventional rigid laryngoscopy and excision is effective with little or no complications.

In conclusion, although we lack the gold standard facility for the treatment of RRP, some success may be achieved with simple conventional rigid endoscopy and excision as shown from our study. Policy change can eliminate the use of tracheostomy which may be reserved for life saving situations in order to avoid the risks associated with it.

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