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Juvenile laryngeal papillomatosis: report of 8 cases from Mali

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ABSTRACT

The recurrent respiratory papillomatosis is a benign lesion induced by virus. The condition is manifest clinically with progressive huskiness of the voice. The larynx is the site most often affected. Lesions are frequently multiple and often recur even after radical treatment.

OBJECTIVE: To report our experience about 8 cases.

MATERIAL AND METHODS:

Seven cases of juvenile laryngeal papillomatosis encountered in our unit during the period from February 2013 to November 2014. They were seen in the age-range of 2 years - 7 years.

The indirect laryngoscopy for some children and direct laryngoscopy have allowed to localize the neoplasm.

Pathological findings revealed a histological confirmation of the nature of the tumor. The removal of the tumor in all cases was made under laryngoscopy suspension. The indication of tracheotomy depended on the severity of dyspnoea and clinical evolution. Pathological findings revealed a histological confirmation of the nature of the tumor. The removal of the tumor in all cases was made under laryngoscopy suspension. The indication of tracheotomy depended on the severity of dyspnoea and clinical evolution.

RESULTS: We found in mean age 6 years and the male predominance, 6 cases (75%). The common clinical features were dysphonia and dyspnoea.

The affection was mainly concerned the larynx (100%), especially the glottic region in 75%. The patients were treated by using to excision with cupped forceps. The courses of ablation were an average of four for our patients. Tracheostomy was performed 5 times in 3 patients, 2 times in the same patient (38%).

CONCLUSION: Laryngeal papillomatosis is a condition not to be overlooked in children in our unit. This is an emergency because very often patients are seen at the stage of laryngeal stenosis which imposes a tracheotomy.

INTRODUCTION

The viral etiology of laryngeal papillomatosis was first suggested in 1923 by Ullman, who reported the experimental transmission of warts to the vagina of a dog and to his own arm using an extract of human laryngeal papilloma[[1, 2,].

Recurrent respiratory papillomatosis (RRP), which is caused by human papillomavirus types 6 and 11, is the most common benign neoplasm of the larynx among children and the second most frequent cause of childhood hoarseness [3].

Juvenile laryngeal papillomatosis is part of a spectrum of diseases characterised by recurrent papillomata of the mucous membrane of the upper respiratory and food passages [4].The larynx is the site most often affected, and is often the only site [4]. Other organs near the larynx can be affected by the lesions. Lesions are frequently multiple and often recur even after radical treatment [4]. The condition is manifest clinically with progressive huskiness of the voice [4]. Stridor and acute respiratory obstruction may occur late in the disease, necessitating tracheostomy [4].

The incidence of papillomatosis is low, but its management is difficult because of its tendency for rapid recurrence [4,5].

In tropical areas some studies suggest a significant rate for laryngeal papillomatosis [6,7,8,9].

OBJECTIVE

To analyze the different clinical and therapeutic aspects in 8 cases of laryngeal Papillomatosis of the child.

PATIENTS AND METHODS

A total of 8 patients have been treated at Unit of Ear, Nose and Throat diseases of the reference health center in the District IV of Bamako (MALI) with juvenile laryngeal papillomatosis during the period from February 2013 to November 2014, with an age between 2 and 7 years

(mean 6 years); of these, 6 (75%) were male and 2 (25%) female.

- The indirect laryngoscopy for some children and direct laryngoscopy have allowed to localize the neoplasm.

- Pathological findings revealed a histological confirmation of the nature of the tumor.

- The removal of the tumor in all cases was made under laryngoscopy suspension.

- The indication of tracheotomy depended on the severity of dyspnea and clinical evolution.

RESULTS

Table I. Socio-demographic, clinical and therapeutic characteristics

Case N°	Sex	Age	Clinical features		Site of papilloma		Treatment	
			Dyspnoea	Hoarseness of voice	Glottis	Subglottis	(course of excisions with forceps)	Tracheostomy
1.	F	2	+ +	+	+		3	
2.	M	7	+	++	+		2	
3.	M	3	+ + +	+++	+	+	5	2
4.	M	5	+ + +	+++	+		6	1
5.	M	7	+	+++	+		2	
6.	F	4	+	++	+		2	
7.	M	6	+ +	++	+		2	
8.	M	7	+ + +	+++	+	+++	4	2

Table 1

DISCUSSION

Laryngeal papillomatosis is the presence of non-invasive benign epithelial tumors, which includes both adult and juvenile-onset laryngeal papillomatosis (JLP) [3,10]. Multiple laryngeal papillomatosis is usually seen in children. This study allowed us to assess the clinical and therapeutic of laryngeal papillomatosis aspects in our Unit. Indeed this pathology is generally poorly known base medical staff which makes that the ENT specialist sees his patients late in the advanced stage of the disease, very often characterized by marked laryngeal stenosis.

This situation of backwardness in the care of his patients found his explanation also in determinants such as access to care, populations away from specialists who are partly in urban areas very often lack financial means to evacuate; all specialists of the country are concentrated in the capital of the country; the lack of public policy for the promotion of ENT health allowing to build communities at the primary stage of the disease with its dysphonia including; will be added to the lack of adequate instruments as the equipment of laryngoscopy in suspension, absent in specialized care structures remote from the capital.

The papillomas develop fast and are susceptible to]. The overall prevalence of JLP is 3.6 to 4.3 per relapse, but rarely in a malignant transformation[3,11,12]. 100,000 children, 80% of whom are under 7 years old. JLP is mostly seen in children younger than 4 years old [3,13].

The onset of JLP is associated with human papillomatosis virus (HPV)[3,14].

We found in mean age 6 years for our study,

in the tropics, laryngeal papillomatosis mainly concerns the child witnessed by many studies [6, 7,8,9] and the male predominance, 6 cases (75%) observed in our study is similar to that reported by most of the authors in Africa sub-Saharan [6,7,8,9].

JLP is transmitted from mother to fetus, i.e. disease onset is observed after months or years of incubation after the infants were delivered and infected by a mother with condyloma acuminate [3,15,16].

The affection was mainly concerned in our study the larynx (100%) which including the glottic region in 75%. The majority of the studies note this laryngeal predominance for affection but other extralaryngeal locations, including tracheobronchial, pulmonary are reported [8 , 9, 18,19, 20, 21].

In most pediatric cases, the time from onset of symptoms to diagnosis of RRP is approximately 1 year, although the duration of symptoms may vary [3, 22, 23]. Because it is extremely difficult to examine children, early symptoms such as hoarseness are often misdiagnosed as laryngitis[3, 22, 23]. It is not until there is difficulty in breathing, is laryngoscopy used to make the correct diagnosis of laryngeal papillomatosis[3, 22, 23].

Dysphonia and laryngeal dyspnoea were symptoms especially found in our patients. Management of Juvenile Laryngeal Papillomatosis can be difficult, and tends to be surgical [24, 25].

The key to successful treatment is to remove all visible papillomas, without injuring normal tissues, to prevent recurrence.

At present, there is no cure for RRP. The current standard of care is surgical therapy with a goal of complete removal of papillomatosis and preservation of normal structures [3].

Some authorities report that children may require tracheostomy, although some believe

that this should be avoided unless absolutely necessary [24].

Previously, this disease was treated by a combination therapy, such as cryotherapy,

electric cauterization, ultrasound and chemotherapy. However, those treatments may cause severe damage to tissue, leading to tissue adhesion induced by secondary edema or a narrow respiratory tract [3].

Laser ablation with a laryngoscope is a good alternative. After the papillomatosis has been removed, no damage to tissues or structures will be found. The carbon dioxide (CO2) laser has replaced cold instruments for removing RRP [20]. Even so, the recurrence rate after one operation is higher than 90% [1,2, 3]. However, many treatments may be required over a prolonged period. Immunotherapy

with alpha interferon has been used, but generally has not been found to produce a sustained benefit [24, 25, 26,27].

Our courses of ablation were an average of four for our patients, which confirms the recurrent character of the disease. Tracheostomy was performed 5 times in 3 patients, 2 times in the same patient (38%), but early diagnosis avoids this emergency, we did not notice any complications from this chirugical act.

CONCLUSION

Laryngeal papillomatosis is a condition not to be overlooked in children in our unit. This is an emergency

because very often patients are seen at the stage of laryngeal stenosis which imposes a tracheotomy.

Early diagnosis allows a better support. Ablation by forceps remains the only surgical means available according to our technical platform. The recurrent character of the disease requires diligent monitoring.

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