

# **RRP Medical Reference Service**

**An RRP Foundation Publication**

**edited by**

**Dave Wunrow and Bill Stern**

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## Preface

The *RRP Medical Reference Service* is intended to be of potential interest to RRP patients/families seeking treatment, practitioners providing care, micro biological researchers as well as others interested in developing a comprehensive understanding of recurrent respiratory papillomatosis.

This issue focuses on a selection of references with abstracts from recent (2006 and later) RRP related publications. These listings are sorted in approximate reverse chronological order as indicated by the "PMID" numbers. Each listing is formatted as follows:

Journal or reference  
Title  
Language (if it is not specified assume article is in English)  
Author(s)  
Primary affiliation (when specified)  
Abstract  
PMID (PubMed ID)

If copies of complete articles are desired, we suggest that you request a reprint from one of the authors. If you need assistance in this regard or if you have any other questions or comments please feel free to contact:

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## RRPF Selected Articles and Abstracts

[J Laryngol Otol.](#) 2006 Jul;120(7):561-5.

### **Is intralesional cidofovir worthwhile in juvenile recurrent respiratory papillomatosis?**

[Sheahan P](#), [Sexton S](#), [Russell JD](#).

Department of Otorhinolaryngology-Head and Neck Surgery, Our Lady's Hospital for Sick Children, Crumlin, Dublin, Ireland.

Objective: To investigate the efficacy of intralesional cidofovir in the treatment of recurrent respiratory papillomatosis (RRP) in children. Methods: Prospective observational study of four consecutive children with RRP treated at an academic tertiary children's hospital.

Laryngo-bronchoscopy was performed at three- to five-weekly intervals.

Photodocumentation was obtained and disease severity assessed using an anatomical RRP severity score. Surgical debulking of large papillomas was then performed, and cidofovir (5 mg/ml) injected into any remaining papillomas as well as submucosally at the sites of resected papillomas. The efficacy of cidofovir was assessed by the change in papilloma severity score over the course of the treatment. Results: Complete disease remission was obtained in one patient, with a partial response seen in two others. One patient showed no significant response. The greatest beneficial effect was seen after the fourth cidofovir injection; however, two patients demonstrated a deterioration in severity scores after treatment was withheld at this point. Both responded well to further cidofovir injections. However, a clear plateau in the response to cidofovir was seen in all patients by the eighth injection. Conclusion: Intralesional cidofovir may help control papilloma regrowth and reduce disease severity in many children with RRP. In most cases, cidofovir would appear to be less efficacious in causing disease eradication. There appears to be little evidence to support prolonged treatment regimes (i.e. more than eight treatments).

PMID: 16834805 [PubMed - in process]

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[Otolaryngol Head Neck Surg.](#) 2006 Jul;135(1):149-51.

### **Office-based intralesional cidofovir injections for nasal septal papilloma: A pilot study.**

[Shemen LJ](#), [Shnayder Y](#).

Department of Otolaryngology, New York University School of Medicine; Lenox Hill Hospital; Manhattan Eye Ear Nose and Throat Hospital.

**OBJECTIVES:** To determine if nasal septal papilloma is responsive to intralesional cidofovir injections. **METHODS:** Five adult males, ages 37 to 57, presented with nasal septal or columellar papilloma. Three lesions had been previously excised with the laser and recurred. The lesions were injected with cidofovir on a monthly basis until complete resolution or any residual lesion was excised afterwards with the laser. **RESULTS:** All patients achieved disease remission sustained over 10 to 24 months. Overall doses were much lower than those described for laryngeal papillomatosis and no toxic effects were observed. **CONCLUSIONS:** Office-based intralesional injections of cidofovir may show benefit in the treatment of nasal septal papilloma. EBM rating: C-4.

PMID: 16815201 [PubMed - in process]

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[Otolaryngol Head Neck Surg.](#) 2006 Jul;135(1):22-7.

### **Effect of local application of cidofovir on the control of recurrences in recurrent laryngeal papillomatosis.**

[Pontes P](#), [Avelino M](#), [Pignatari S](#), [Weckx LL](#).

Department of Otolaryngology-Head and Neck Surgery, Sao Paulo Federal University, Sao Paulo, Brazil.

**OBJECTIVE:** To study the effect of local application of cidofovir in patients with recurrent laryngeal papillomatosis (RLP) by measuring the interval between recurrences and the extent of disease at each recurrence. **STUDY DESIGN AND SETTING:** The study group included 10 patients with RLP. Videolaryngoscopic analysis of previous RLP operations for each patient before starting cidofovir and the number and timing of pre-cidofovir recurrences of the disease provided data for a self-control group. The cidofovir was injected with a laryngeal needle during papilloma resection operations. To evaluate the changes and the extent of the disease, the authors developed a staging system based on anatomic topography. The extent of the disease and the intervals between recurrences were analyzed and statistically compared. **RESULTS:** The median interval between recurrences significantly increased from 102 days before cidofovir to 239 days after treatment. No local or systemic side effects were observed. **CONCLUSIONS:** The study supports the hypothesis that cidofovir is an effective adjunct in treating recurrences of RLP. EBM rating: C-4.

PMID: 16815177 [PubMed - in process]

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[Infection.](#) 2006 Jun;34(3):176-80.

### **Human papillomavirus associated with papillary squamous cell carcinoma of the oropharynx in a renal transplant recipient.**

[Cobo F](#), [Garcia C](#), [Talavera P](#), [Bravo J](#), [Cabrera C](#), [Concha A](#).

Infectious Pathology Unit (Dept. of Pathology), Hospital Universitario Virgen de las Nieves, Avenida Fuerzas Armadas, 2, 18014, Granada, Spain, fernancobo@fundacionhvn.org.

The papillary squamous cell carcinoma (PSCC) is a rare variant of the head and neck squamous cell carcinoma. Established etiological factors can include tobacco smoking and heavy alcohol abuse. Moreover, human papillomavirus infection can be involved in the pathogenesis of PSCC. This tumor is more frequent in patients with immunosuppression including those who have received a transplant. Most of the cases are produced by genotype HPV-6 and HPV-16, although there is a possibility of infection by other HPV subtypes. We present a case report of a PSCC and papilloma with oropharyngeal location in which high-risk HPV type 16 and low-risk HPV type 6, respectively, were identified by PCR in a renal transplant patient.

PMID: 16804664 [PubMed - in process]

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[J Exp Clin Cancer Res](#). 2006 Mar;25(1):21-8.

### **Incidence of human papillomavirus infection in oral leukoplakia. Indications for a viral aetiology.**

[Cianfriglia F](#), [Di Gregorio DA](#), [Cianfriglia C](#), [Marandino F](#), [Perrone Donnorso R](#), [Vocaturro A](#).

Department of Neurosciences, Maxillo-Facial Unit and Department of Pathology, Rome, Italy.

Epidemiological and experimental studies have indicated a possible role of human papillomavirus (HPV) in the etiopathogenesis of oral premalignant lesions and tumors. The aim of this study was to establish the incidence of HPV infection and the typing of genotypes in some patients with nonmalignant oral cavity pathology and healthy subjects. We selected 80 subjects affected by the following pathologies: oral leukoplakia (20), squamous cell papilloma (6), various forms of stomatitis (30), lichen planus (15), burning mouth syndrome (BMS, 9). Ten healthy subjects were used as control. The patients underwent a brushing directly on the lesion or on the lower gums and on the dorsal surface of the tongue and a new, sensitive method of in situ hybridization (ISH) with colorimetric signal amplification was used for HPV detecting. The samples were tested with a Mix probe, which identifies most of the HPV genotypes and, in positive cases, the specific probe for the 6-11, 31-33-51 and 16-18 genotypes, was used. Leukoplakia and papilloma were, therefore, associated with the HPV infection, differently from the other pathologies and healthy oral mucosa (chi-squared < 0.005). In conclusion, according to our findings, HPV is a specific risk factor for the development of oral premalignant lesions.

PMID: 16761614 [PubMed - in process]

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[Clin Otolaryngol.](#) 2006 Jun;31(3):245.

**Investigation into the effects of cidofovir on an in vitro model of recurrent respiratory papillomatosis.**

[Donne AJ](#), [Hampson L](#), [He X](#), [Rothera MP](#), [Homer JJ](#), [Hampson IN](#).

Research laboratories, St Mary's Hospital, Manchester, UK.

**Problem.** Recurrent respiratory papillomatosis (RRP) has no cure, and cidofovir is currently the most contemporary adjuvant treatment. Cidofovir has reported activity against Human Papilloma Virus type 16, but no laboratory studies have yet been performed on HPV type 6 which is the main cause of RRP. This work describes the generation of a novel HPV 6 related cell line and its use to evaluate the effects of Cidofovir. **Method.** HPV6b E6 cDNA was stably introduced into HPV negative C33A cervical carcinoma cells to produce the C33AT6E6 cell line. Two different doses of Cidofovir were applied to parent C33A, C33AT6E6 and C33AT16E6 (type 16 cell line) with appropriate controls. Growth and FACS cell cycle analysis were performed after 3 and 6 days of continuous exposure followed by 2 and 3 days post-drug withdrawal. **Result.** PCR analysis confirmed HPV6 E6 expression in C33AT6E6 cells. High dose cidofovir was toxic at 3 and 6 days exposure in all cells tested. Low dose exposure was toxic for C33AT16E6 cells at 3 days whereas C33A and C33AT6E6 only showed minimal toxicity at 6 days. C33A and C33AT6E6 cells also showed earlier recovery following drug withdrawal. **Conclusion.** Cidofovir showed varying degrees of non-specific toxicity against all three cell lines tested. However, HPV16 E6 expressing cells were more sensitive than either parent or HPV6 E6 expressing cells indicating that cidofovir has no selective advantage for the RRP related HPV6 E6 expressing cell line.

PMID: 16759262 [PubMed - in process]

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[Dis Esophagus.](#) 2006;19(3):208-11.

**Primary glomangioma of the esophagus mimicking esophageal papilloma.**

[Tomas D](#), [Tomic K](#), [Bekavac-Beslin M](#), [Jukic Z](#), [Belicza M](#), [Kruslin B](#).

Ljudevit Jurak Department of Pathology, Sestre milosrdnice University Hospital, Zagreb, Croatia. dtomas@kbsm.hr

We report a case of glomangioma of the esophagus in a 28-year-old woman who presented

with a 3-year history of vague discomfort, pain and heat in the neck. At initial gross examination, the tumor mimicked an esophageal papilloma. The resected esophageal specimen contained a polypoid, whitish-gray mass, which measured 3 cm in maximum diameter. Microscopically the tumor consisted of loose fibrovascular stroma heavily infiltrated with mononuclear inflammatory cells and covered with focally hyperkeratotic, parakeratotic and acanthotic squamous epithelium without atypia. In the deeper area immediately above the true muscular layer of the esophageal wall, microscopical examination revealed the neoplasm consisting of numerous, small-to-medium branched vessels covered by regular endothelium and filled with erythrocytes. The loose stroma around the vessels contained poorly circumscribed nests of small, round to oval cells with a uniform appearance. Immunohistochemically, the tumor cells were immunoreactive for smooth muscle actin and vimentin and non-immunoreactive for CD34, CD117, desmin, pan-cytokeratin, synaptophysin, neuron-specific enolase and S-100 protein. Despite its bland histology, the infiltrative growth pattern was suggestive of aggressive behavior; thus, an appropriate clinical follow-up was recommended. An accurate diagnosis and an understanding of the behavior of these rare tumors, especially in an unusual location, are crucial to their management and clinical outcome.

PMID: 16723001 [PubMed - in process]

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[Med Hypotheses](#). 2006;67(2):431-2. Epub 2006 May 6.

**Prophylactic human papilloma virus vaccines for cervical cancer may also prevent development of breast and oropharyngeal cancers in women.**

[Harputluoglu H](#), [Dizdar O](#), [Altundag K](#).

Department of Medical Oncology, Hacettepe University Institute of Oncology, 06100 Sıhhiye, Ankara, Turkey.

No abstract available.

PMID: 16678979 [PubMed - in process]

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[Ann Otol Rhinol Laryngol](#). 2006 Apr;115(4):277-84.

**Imaging the human vocal folds in vivo with optical coherence tomography: a preliminary experience.**

[Klein AM](#), [Pierce MC](#), [Zeitels SM](#), [Anderson RR](#), [Kobler JB](#), [Shishkov M](#), [de Boer JF](#).

Department of Surgery, Harvard Medical School, Boston, Massachusetts, USA.

**OBJECTIVES:** Optical coherence tomography (OCT) and polarization-sensitive OCT (PS-OCT) are promising noninvasive methods for in vivo, cross-sectional imaging of the microstructure of the vocal folds. Previous studies in other tissues have shown an axial resolution of less than 10 microm and a maximum imaging depth of about 2 mm. The objectives of this pilot study were to obtain images from the vocal folds of subjects who were being evaluated and/or treated for vocal fold disease and to evaluate how well normal and pathologic microstructure could be seen in these images. **METHODS:** Twenty-six vocal folds in 13 subjects were imaged with a flexible OCT probe. The images were successfully collected from subjects who were either topically anesthetized or under general anesthesia for microlaryngoscopic procedures. **RESULTS:** The thickness of the epithelium, the relative collagen content of the subepithelial connective tissue, and certain characteristic features of lesions (including cysts, scarring, and papilloma) were seen in the OCT and PS-OCT images. **CONCLUSIONS:** "Live microscopy" of the human vocal folds is very promising for improved diagnosis, mapping, and treatment planning. To our knowledge, this study is the first application of PS-OCT for in vivo imaging of the human vocal folds.

PMID: 16676824 [PubMed - indexed for MEDLINE]

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[Rev Med Inst Mex Seguro Soc.](#) 2006 Mar-Apr;44(2):147-53.

### **[Human papilloma virus and its association with oral cancer]**

[Article in Spanish]

[Bologna-Molina RE](#), [Castaneda-Castaneira RE](#), [Molina-Frechero N](#), [Perez-Rodriguez E](#).

Departamento de Atencion a la Salud, Ciencias Biologicas y de la Salud, Universidad Autonoma Metropolitana-Xochimilco. rbologna@correo.xoc.uam.mx

Oral cancer is a pathology of multifactorial etiology, where some factors such as age, sex, race, genetic predisposition, nutrition, and the use of tobacco and alcohol have a bearing on. In the last years, some authors showed the implication of the human papilloma virus (HPV) in the development of precarcinogenic lesions and of oral squamous cell carcinoma. The infection by HPV has been associated to hyperplastic epithelial lesions, papilloma and warty carcinoma in skin and in different types of mucosa, including the anus-genital, cervical, urethral, tracheobronchial, nasal, laryngeal and oral mucosa tracts. The viral high-risk genotypes (oncogenic) such as 16, 18, 31, 33 and 35 are frequently associated to leukoplakia and squamous carcinoma. An association of HPV with oral squamous carcinoma in patients that consume tobacco and alcohol has been fundamentally established. It is important to study and to frequently review the role that viral infections and cancer have, and maybe in the future, it would be possible to create a vaccine that diminishes the frequency of oncological problems.

PMID: 16674861 [PubMed - in process]

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[J Med Assoc Thai](#). 2006 Feb;89(2):224-30.

**Unplanned intubation during anesthesia: review of 31 cases from the Thai Anesthesia Incidents Study (THAI study).**

[Chau-In W](#), [Chinachoti T](#), [Punjasawadi Y](#), [Klanarong S](#), [Taratarnkoolwatana K](#).

Department of Anesthesiology, Faculty of Medicine, Srinagarind Hospital, Khon Kaen University, Khon Kaen 40002, Thailand.

**OBJECTIVES:** To examine the causes, outcomes, and contributing factors associated with patients requiring unplanned emergency intubation for adverse respiratory events.

**MATERIAL AND METHOD:** Appropriate unplanned intubation incidents were extracted from the Thai Anesthesia Incidents Study (THAI Study) database conducted between February 1, 2003, and January 31, 2004, and analyzed using descriptive statistics.

**RESULTS:** Thirty-one incidents of unplanned intubation were recorded, 21 of which were due to respiratory problems particularly after bronchoscopy with and without surgery of the upper airway. Six of the 21 cases (28.6%) were children under 10 years of age who suffered from papilloma of the larynx. Sixteen cases of the 31 cases (52%) of the unplanned intubations were due to inadequate ventilation; 13 cases (41%) due to laryngeal edema; 11 cases (36%) due to sedative agents. The other events were the result of unstable hemodynamics, severe metabolic acidosis, muscle relaxants, and intrapulmonary lesions.

Eighteen cases of unplanned intubations (18/31) (58%) occurred in the Post-Anesthesia Care Unit, 5 cases (16%) in a ward, and 4 (13%) in the operating room. The reported contributing factors included inadequate experience, lack of supervision and the patient's condition.

**CONCLUSION:** Major incidents of unplanned intubation occurred after bronchoscopy. Common contributing factors related to inadequate ventilation, airway obstruction, sedative agents and unstable hemodynamics. Quality assurance, additional training, and improved supervision tended to minimize the incidents.

PMID: 16579010 [PubMed - indexed for MEDLINE]

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[Ann Otol Rhinol Laryngol](#). 2006 Mar;115(3):175-81.

**Natural history of adult-onset laryngeal papillomatosis following multiple cidofovir injections.**

[Naiman AN](#), [Abedipour D](#), [Ayari S](#), [Fresnel E](#), [Coulombeau B](#), [Bour JB](#), [Froehlich P](#).

Department of Otolaryngology, Edouard Herriot University Hospital, Lyon, France.

**OBJECTIVES:** A prospective study was performed to assess the intermediate and long-term efficacy of intralesional cidofovir therapy associated with surgical excision in laryngeal papillomatosis in adults. **METHODS:** Endoscopy with intralesional injection of cidofovir 5 mg/mL was performed 3 times at 4-week intervals. The concentration was later increased to 7.5 mg/mL and the interval between injections shortened to 2 weeks. Further treatment was performed at 3 or 6 months, depending on the evolution of the papillomas. After complete remission, the treatment was stopped and the patients were reviewed every 6 months. **RESULTS:** Nineteen patients completed the protocol, with a mean of 4.5 injections each. Complete remission was obtained in 17 cases (89%) after a mean of 3.8 procedures. Remission was stable after a mean follow-up of 24 months (range, 8 to 57 months). With higher cidofovir concentrations at shorter intervals, patients needed fewer injections to achieve remission (mean, 2.1 versus 4.7 injections). **CONCLUSIONS:** The effectiveness of intralesional cidofovir therapy in adult-onset recurrent respiratory papillomatosis was impressive. Once obtained, complete remission was stable on intermediate or long-term follow-up. The concentration and the interval between injections seemed to influence the number of injections necessary to achieve remission.

PMID: 16572605 [PubMed - indexed for MEDLINE]

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[Curr Drug Targets Infect Disord](#). 2005 Dec;5(4):307-400.

### **Developments in antiviral drug design, discovery and development in 2004.**

[Meanwell NA](#), [Belema M](#), [Carini DJ](#), [D'Andrea SV](#), [Kadow JF](#), [Krystal M](#), [Naidu BN](#), [Regueiro-Ren A](#), [Scola PM](#), [Sit SY](#), [Walker MA](#), [Wang T](#), [Yeung KS](#).

Department of Chemistry, The Bristol-Myers Squibb Pharmaceutical Research Institute, Wallingford, CT 06492, USA. Nicholas.Meanwell@bms.com

This article summarizes key aspects of progress made during 2004 toward the design, discovery and development of antiviral agents for clinical use. Important developments in the identification, characterization and clinical utility of inhibitors of human immunodeficiency virus; the hepatitis viruses, hepatitis B, hepatitis C; the herpes family of viruses, herpes simplex viruses 1 and 2, varicella zoster virus, Epstein-Barr virus and human cytomegalovirus; the respiratory viruses, influenza, respiratory syncytial virus, human metapneumovirus, picornaviruses, measles and the severe acute respiratory syndrome coronavirus; human papilloma virus; rotavirus; Ebola virus and West Nile virus, are reviewed.

PMID: 16535860 [PubMed - indexed for MEDLINE]

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[Histol Histopathol.](#) 2006 Jun;21(6):603-8.

**Expression of matrix metalloproteinase-9 (gelatinase B) in benign, premalignant and malignant laryngeal lesions.**

[Peschos D](#), [Damala C](#), [Stefanou D](#), [Tsanou E](#), [Assimakopoulos D](#), [Vougiouklakis T](#), [Charalabopoulos K](#), [Agnantis NJ](#).

Department of Forensic Medicine, Medical School, University of Ioannina, Ioannina, Greece.

The matrix metalloproteinases (MMPs) are a family of proteolytic zinc-containing enzymes, which are responsible for the breakdown of the extracellular matrix components in pathological and physiological conditions. They are involved in basement membrane disruption, stroma and blood vessel penetration, metastasis and more recently there is evidence that they participate in tumor growth and angiogenic events. Matrix metalloproteinase 2 and 9 (MMP 2 and 9) belong to the gelatinases, a subgroup of MMPs, and have the capacity to degrade the triple helix type IV collagen of basal lamina of the basement membrane. With the present study, we tried to demonstrate the expression of MMP-9 immunohistochemically, comparatively in benign, premalignant and malignant lesions of the larynx. We studied 154 laryngeal lesions including 55 squamous cell carcinomas, 8 in situ carcinomas, 54 cases of dysplasia (of low and intermediate grade), 13 papillomas and 24 cases of keratosis. Overexpression of MMP 9 was observed in 74.4% and 50% in invasive and in situ squamous cell carcinomas respectively. In dysplastic cases, in papillomas and in keratoses the percentage of overexpression was 62.9%, 61.53% and 54.16% respectively and the expression of MMP-9 was significantly higher in invasive squamous cell carcinomas compared to dysplasias ( $p=0.000004$ ). Also significantly higher was the expression of MMP-9 in dysplastic cases compared to papillomas ( $p=0.023$ ). The MMP-9 expression was related neither to survival nor to the other available clinicopathological parameters (tumor size, grade, clinical stage, lymph node status and patient age). In conclusion, our study indicates that the expression of MMP-9 is up-regulated in a stepwise fashion, with two main steps, the first one, when a dysplastic lesion evolves and the next one, when the dysplasia progresses to invasive carcinoma.

PMID: 16528670 [PubMed - indexed for MEDLINE]

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[Respiration.](#) 2006;73(1):78-89.

**Transbronchial needle injection: a systematic review of a new diagnostic and therapeutic paradigm.**

[Seymour CW](#), [Krimsky WS](#), [Sager J](#), [Kruklitis RJ](#), [Lund ME](#), [Musani AI](#), [Sterman DH](#).

Department of Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA 19104-4283, USA.

BACKGROUND AND OBJECTIVE: Transbronchial needle catheters are commonly used

during flexible and rigid bronchoscopy for needle aspiration. The use of these catheters can be expanded by employing the technique of transbronchial needle injection. METHODS AND RESULTS: By injecting lesions in the airways, peribronchial structures, mediastinum, or lung parenchyma, transbronchial needle injection has been applied to the treatment of lung cancer, inflammatory disorders of the airways, recurrent respiratory papillomatosis, as well as bronchopleural fistulas. Diagnostic applications have included the localization of peripheral lung nodules as well as sentinel lymph nodes. CONCLUSIONS: Our review defines this bronchoscopic technique and summarizes its various reported applications. Copyright 2006 S. Karger AG, Basel.

PMID: 16498271 [PubMed - indexed for MEDLINE]

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[Int J Pediatr Otorhinolaryngol.](#) 2006 Jul;70(7):1235-40. Epub 2006 Feb 17.

### **Four mutations in Epidermodysplasia verruciformis 1 (EVER1) gene are not contributors to susceptibility in RRP.**

[Donfack J](#), [Buchinsky FJ](#), [Derkav CS](#), [Steinberg BM](#), [Choi SS](#), [Conley SF](#), [Meyer CM 3rd](#), [McClay JE](#), [Campisi P](#), [Hu FZ](#), [Preston RA](#), [Abramson AL](#), [Ehrlich GD](#), [Post JC](#).

Allegheny General Hospital, Allegheny-Singer Research Institute, 320 East North Avenue, 11th Floor, South Tower, Room 1171, Pittsburgh, PA 15212-4772, USA.

OBJECTIVE: Epidermodysplasia verruciformis is a skin disease characterized by abnormal susceptibility to human papilloma viruses. Recently four mutations in the Epidermodysplasia verruciformis 1 gene (EVER1, also known as TMC6) have been associated with the disease. Because of the phenotypic similarity between Epidermodysplasia verruciformis and recurrent respiratory papillomatosis, we decided to investigate whether any of these mutations accounts for the susceptibility to human papilloma viruses in subjects with recurrent respiratory papillomatosis (RRP). METHODS: Allele-specific PCR and restriction fragment length polymorphisms (RFLPs) were employed for genotyping a cohort of 101 patients with recurrent respiratory papillomatosis. RESULTS: None of these four mutations were found in the studied subjects. CONCLUSION: The absence of these mutations in RRP patients might indicate that EVER 1 alleles are not associated with susceptibility to RRP, or that other, as yet unidentified, mutations in the Epidermodysplasia verruciformis 1 gene, might account for the susceptibility to RRP.

PMID: 16487602 [PubMed - in process]

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[Vestn Otorinolaringol.](#) 2006;(1):46-8.

**[Efficacy of indinol in antirecurrence therapy of juvenile respiratory papillomatosis]**

[Article in Russian]

[Soldatskii IuL](#), [Kiselev VI](#), [Onufrieva EK](#), [Steklov AM](#), [Shchepin NV](#), [Strygina IuV](#), [Gasparian SF](#), [Pogosova IE](#).

The study of indinol efficacy in antirecurrence therapy of respiratory papillomatosis was performed in 46 children aged 2-14 years. The treatment lasted at least 12 weeks. Duration of a recurrence-free period before and after indinol administration was analysed. The response was observed in 30 (65.2%) patients. In 5 (10.9%) patients the remission continued from 2 to 3 years 10 months. In 25 (54.3%) patients recurrence-free period increased 1,5-6-fold. Side effects were not registered. Simple in use, cheap, well tolerated, usable with other treatments, indinol is recommended as a method of choice in antirecurrence treatment of recurrent respiratory papillomatosis.

PMID: 16482011 [PubMed - indexed for MEDLINE]

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[Int J Pediatr Otorhinolaryngol](#). 2006 Apr;70(4):759. Epub 2006 Feb 14.

**RE: Extra-esophageal reflux and recurrent respiratory papilloma in children.**

[Brodsky L](#).

Department of Pediatric Otolaryngology, Children's Hospital, 219 Bryant Street, Buffalo, NY 14222, USA.

No abstract available.

PMID: 16481050 [PubMed - in process]

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[Ann Otol Rhinol Laryngol](#). 2006 Jan;115(1):1-11.

**Recurrent respiratory papillomatosis.**

[Derkay CS](#), [Darrow DH](#).

Department of Otolaryngology, Eastern Virginia Medical School, 825 Fairfax Ave, Suite 510, Norfolk, VA 23507, USA.

Recurrent respiratory papillomatosis is a frustrating and challenging disease for surgeons, patients, and patients' families. Although the voice and airway manifestations are managed surgically, a "cure" for this disease remains elusive. In this edition of the "Seminar Series," we endeavor to review the current literature regarding the epidemiology, etiology, clinical manifestations, and surgical and medical treatments of this disorder. The key to future management of recurrent respiratory papillomatosis may lie in its prevention, if current efforts to develop an effective vaccine come to fruition.

PMID: 16466093 [PubMed - indexed for MEDLINE]

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[J Clin Anesth](#). 2005 Dec;17(8):610-3.

### **Anesthetic management for laser excision of recurrent respiratory papillomatosis in a third trimester parturient.**

[Tripi PA](#), [Kandil ES](#), [Arnold JE](#).

Department of Anesthesiology, University Hospitals of Cleveland, Rainbow Babies and Children's Hospital, Case Western Reserve University School of Medicine, LKSD 2500, Cleveland, OH 44106-5007, USA. paul.tripi@uhhs.com

Recurrent respiratory papillomatosis (RRP) is characterized by the development of laryngeal papillomas, which can produce partial to complete upper airway obstruction. Patients with RRP often require intermittent surgical excision to treat symptoms such as hoarseness and stridor, and to control progression of the lesions. The anesthetic management of such patients is challenging, and it requires carefully coordinated care between an anesthesiologist and otolaryngologist. We present 2 cases of general anesthesia administration during surgical excision of laryngeal papillomas, both occurring during the third trimester of separate pregnancies in the same parturient. The complexity of management was amplified in these cases because of the physiological and anatomical changes associated with pregnancy, along with the need to monitor fetal well-being. Possible complications included complete airway obstruction, pulmonary aspiration of gastric contents, hypoxemia, fetal distress, and preterm labor. Because pregnancy may lead to activation of human papillomavirus, the causative organism of RRP, management guidelines are provided for anesthesiologists who may care for patients with RRP during pregnancy.

PMID: 16427531 [PubMed - indexed for MEDLINE]

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[Ann Otol Rhinol Laryngol](#). 2005 Nov;114(11):834-5.

### **Cidofovir and the black box warning.**

[Inglis AF Jr.](#)

No abstract available.

PMID: 16358602 [PubMed - indexed for MEDLINE]

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[HNO](#). 2005 Nov;53(11):921-7.

**[Current therapeutic options for recurrent respiratory papillomatosis]**

[Article in German]

[Huber K](#), [Sadick H](#), [Gotte K](#).

Universitäts-HNO-Klinik Mannheim.

The purpose of this review is to describe and to critically discuss recent advances in the management of recurrent respiratory papillomatosis (RRP). The goal of surgery in RRP remains the control of symptoms. A curative therapy cannot be expected. The microdebrider and the CO(2)-laser are currently the most widely used surgical options. Literature reports an increase in adjuvant medical therapies of 10-22%. The most common drugs in adjuvant therapy are interferon, cidofovir and indole-3-carbinole/diindolylmethane. The lack of controlled studies limits our ability to accurately assess the antiviral action of the adjuvant therapies. At the moment, therapeutic interventions remain focused on the surgical removal of papillomas when possible, and additional adjuvant therapy is available for the minority of patients for whom surgical management fails to adequately control their disease. Recent advances in immunologic research offer the hope of immune system modulation as potential future treatment modalities to better control this disease process.

PMID: 16142445 [PubMed - indexed for MEDLINE]

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[Laryngorhinootologie](#). 2005 Aug;84(8):602-7.

**[Malignant transformation of a juvenile papilloma in a 11 year old boy]**

[Article in German]

[Lesinski-Schiedat A](#), [Hemmanouil I](#), [Sauer-Gonen M](#), [Flemming P](#), [Freihorst I](#), [Kempf HG](#), [Lenarz T](#).

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**BACKGROUND:** The juvenile laryngeal papilloma is the most common benign neoplasm in children. Often the entity shows an elongated recurrent course of disease with an expansion into the tracheo-bronchial system. Sporadic malignant transformation in adults with a papilloma was reported after treatment with radiotherapy alone or in combination with the intake of additional toxins (e. g. nicotine). Similar reports of a malignant transformation of juvenile papillomas without additional risk factors is very rarely reported. **CASE REPORT:** We report about an 11 year old boy, who suffered from a juvenile laryngeal papilloma. The multiple laser surgical procedures and a therapy with interferon resulted in a short-term remissions. A tracheotomy was inevitable. Seven months after the first diagnosis of the papilloma a regional metastatic squamous cell carcinoma was found. In spite of combined radiotherapy and chemotherapy the boy died 11 months later. **CONCLUSIONS:** The spontaneous malignant transformation of a juvenile papilloma in a squamous cell carcinoma is extremely rare. The surgical intervention as well the radiotherapy and chemotherapy using interferon was unsuccessful due to the high grade of malignancy. In view of the very short time interval between first diagnosis of juvenile papilloma and the subsequent malignant transformation, one must consider either the potential presence of a very aggressive form of papilloma or alternative two coincident independent diseases.

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### **[Treatment of cutaneous human papilloma virus, poxvirus and herpes simplex virus infections with topical cidofovir in HIV positive patients]**

[Article in French]

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**INTRODUCTION:** Cidofovir (Vistide) is an antiviral marketed for the treatment of cytomegalovirus retinitis. Clinical efficacy has been reported with its broad antiviral spectrum that includes poxvirus, human papilloma virus and Herpes simplex. In immunodepressed patients, these infectious dermatoses are often recurrent and resistant. In an open study, we assessed the efficacy and clinical tolerance of cidofovir gel at 1 p. 100. **PATIENTS AND METHODS:** Twelve HIV-infected adults were included. Cidofovir gel at 1 p. 100 was applied directly on the lesions, once a day, for two weeks on the molluscum and condylomas, four weeks on the warts and one week on the chronic herpes. **RESULTS:** Four patients presented with warts and 3 of them with verruca plana. In 2 of the verruca plana

patients, regression was complete although relapse was observed. Two failures were noted. Local application of the gel was not tolerated by one patient suffering from condylomas of the penis. Four patients presented with molluscum contagiosum. Two complete regressions with strong local reaction and two partial regressions were observed. The latter two patients exhibited severe immunodepression, one of them subsequently received infusions of cidofovir. Two women suffering from vulvar and perianal herpes resistant to acyclovir were treated for one week with cidofovir gel at 1 p. 100: no response was obtained. One of the patients stopped treatment because of local intolerance. A third, less immunodepressed, woman responded partially. COMMENTS: In HIV-positive patients, cidofovir in topical form appears to be indicated in extensive and confluent molluscum contagiosum. However, the effect occurs at the cost of local inflammation. The results are disappointing in papillomavirus lesions and in chronic acyclovir-resistant herpes ulcerations, efficacy is debatable.

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