

出國報告（出國類別：參加國際醫學會議）

第四屆世界頭頸部腫瘤醫學會聯盟
國際醫學會議【The 4th World Congress
of International Federation of Head and
Neck Oncologic Societies，2010
（IFHNOS 2010 Seoul）】

服務機關：國軍桃園總醫院

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派赴國家：韓國

出國期間：99年6月15日至6月19日

報告日期：99年7月1日

中文摘要

外耳道之腺樣囊狀癌 (EAC)

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目的：外耳道之腺樣囊狀癌 (EAC) 為非常罕見，本文為一病例報告。

方法：病人為一 78 歲男性，主訴為右側耳道內間歇性疼痛與耳內腫脹感將近五個月之久，經外科手術切除後病理診斷確定為外耳道之腺樣囊狀癌，特提出病例報與關於外耳道之腺樣囊狀癌 (EAC) 之文獻回顧。

結果：病人接受經由右外側顳骨切除、右側全耳下腺切除與選擇性頸部切開術 (程度 I~III 級)。隨即以旋轉胸鎖乳突肌 (SCM) 肌肉合併右側顳肌瓣進行重建手術。患者最後又接受了輔助性之放射療法，手術後持續追蹤 1 年後情況穩定。

結論：外耳道之惡性腫瘤相當是罕見的癌症，且在病理組織學方面多數為鱗狀上皮癌。腺樣囊狀癌 (ACC) 為唾液和黏液腺之腺癌中之特殊癌症。源自於外耳道之腺樣囊狀癌是極為少見，其大部分皆來於 ceruminous 腺、汗腺或異位性之唾腺組織。相對於較低度性 (約 8%) 轉移之皮膚腺樣囊狀癌與發生於其他部位而言，外耳道之腺樣囊狀癌約有 30% 之轉移風險，如同於其他唾腺淋巴組織之腺樣囊狀癌。因此，最初執行積極之寬廣 "en bloc" 外科切除術是必須的。

關鍵字： 腺樣囊狀癌，外耳道，病理組織學

英文摘要 (Abstract)

Title: Adenoid Cystic Carcinoma of the External Auditory Canal

Objective: Adenoid cystic carcinoma occurring in the external auditory canal (EAC) is very rare. One case is being reported. **Methods:** A 78-year-old man who presented with a 5 months history of right-sided intermittent otalgia and ear fullness. Case reports and literatures review concerning the management of EAC adenoid cystic carcinoma tumor are presented. **Results:** An en bloc lateral temporal bone resection, total parotidectomy and selective neck dissection (level I~III) were performed. The defect left over the lateral temporal region was reconstructed by rotation sternocleidomastoid (SCM) muscle and temporalis muscle flap with excellent aesthetic and structural support results. Patient then received the adjuvant radiotherapy. The postoperative course was uneventful after 1 year follow-up. **Conclusions:** Malignant tumors of the external auditory canal are rare and most are squamous cell carcinoma in histopathology. Adenoid cystic carcinoma (ACC) is a specific variant of adenocarcinoma of the salivary and mucous glands. ACC arising in the EAC is exceedingly rare and appear to arise from the ceruminous glands, sweat glands or ectopic salivary gland tissue. Contrasting with the low (8%) metastatic potential of cutaneous adenoid cystic carcinomas of other locations, adenoid cystic carcinoma of the EAC present a 30% metastatic risk, similar to those or adenoid cystic carcinoma of salivary glands. Therefore, an initial aggressive wide "en bloc" surgical resection is mandatory.

Keywords: Adenoid cystic carcinoma, external auditory canal, histopathology

目 次

壹、目的-----	04
貳、過程-----	05
參、心得及建議-----	10
肆、附錄-----	15

本 文

壹、目的

個人服務於國軍桃園總醫院將近二十年，有鑑於本院雖屬衛生署評鑑區域教學醫院，而頭頸部腫瘤其範圍相當廣泛，包含有顏面、顱底、鼻咽腔、鼻腔、口腔、口咽、喉部、下咽及頸部等解剖部位，故隸屬之專科醫師卻難以培訓，而基於個人從事解剖病理專科醫師多年之鞭策意識，欲更深入瞭解有關目前於頭頸部腫瘤國際醫療之最新發展趨勢及頭頸部腫瘤治療與醫學研發之目的。頭頸部腫瘤之術前診斷與治療除須外科醫生、放射學影像、放射與癌症腫瘤醫師和內科腫瘤醫師及整形外科醫師團隊外，更應結合病理專科醫師之正確病理診斷，期使能完整賡續合作之努力與基礎下，更能帶來一種重大之改革，進一步符合頭頸部腫瘤醫學會之宗旨在於為提升國內醫學界對頭頸部腫瘤之瞭解與研究，精進充實頭頸部腫瘤之臨床及基礎研究，以促進國民健康及推動國際學術交流為目的。

貳、過程

本人很榮幸能奉國防部軍醫局獲准代表本院參加於 2010 年 6 月 15 日至 19 日在韓國首爾樂天酒店（Lotte Hotel，隸屬當地五星級飯店）舉辦之第四屆世界頭頸部腫瘤醫學會聯盟之國際醫學會議【The 4th World Congress of International Federation of Head and Neck Oncologic Societies，2010（IFHNOS 2010 Seoul）】。本次醫學研討會主辦單位為韓國，大會議程內容顯現較多元化。本次會議主題為頭頸部腫瘤之轉移性範例（Shifting Paradigms in Head and Neck Oncology）如下圖所示，醫學研討會之論文摘要議題目包括（IFHNOS 2010）九大議題：1. 化學治療，分子標靶療法 2. 流行病學； 3. 影像學、功能分子影像學；4. 生活品質、支持性關心照護； 5. 放射療法；6. 重建、牙齒修復；7. 手術：T2-60；8. 腫瘤生物、遺傳學； 9. 其他相關之醫學議題。



本次首爾 IFHNOS 2010 年之另一特色為開放給對頭頸部腫瘤學之不同領域感興趣之所有個人或團體共同參與。IFHNOS 2010 年首爾醫學科學委員會亦竭誠歡迎提議各類依醫學摘要口頭或海報展示介紹，而且所有發表之醫學報告摘要會前皆被審閱刊通過並登於大會議程書，給予參加者關於頭頸腫瘤之處置訊息。

IFHNOS 2010 年首爾主席 Kwang Hyun Kim, MD, PhD 與地方組織委員會主席：Chung-Hwan Baek, MD, PhD 特別強調於 2010 年將以頭頸部腫瘤學方面之轉移範例為其設計主題。2010 年 IFHNOS 於首爾更將被規劃為一個全球性之壯舉，並且藉此極好盛會讓來自世界各地之高水準之專家和作決策者，提供有關於頭頸部腫瘤處置方面之具有高度價值之訊息。我們進一步期望在外科醫生、放射腫瘤醫師和內科腫瘤醫師及整形外科醫師賡續合作之努力與基礎下，帶來一種重大之

改進。

本研討會安排於 6 月 15 日當地下午一點鐘以後開始於 Lotte Hotel 處報到登記驗證註冊，繳交之註冊費涵蓋普通參加者、科學會議和工業展覽會、開幕式之免費入場與招待會之咖啡點心及 3 餐午餐及大會所提供之議程資料，並於下午六點至八點舉辦致歡迎餐會。

Program at a Glance		研討會議程一覽表：			
Date Time	June 15 Tuesday	June 16 / Wednesday	June 17 / Thursday	June 18 / Friday	June 19 / Saturday
7:00		Instruction Course 01-04 (07:00-08:00)	Instruction Course 05-10 (07:00-08:00)	Instruction Course 15-20 (07:00-08:00)	Instruction Course 27-32 (07:00-07:40)
8:00		Opening Ceremony (08:00-09:00)			Instruction Course 33-38 (07:40-08:20)
9:00		Founder's Address Jatin Shah (09:00-09:40)	Panel/Symposium 07-08 (08:00-09:30)	Panel/Symposium 13-14 (08:00-09:30)	Panel/Symposium 19-20 (08:20-09:50)
		Coffee Break	Coffee Break	Coffee Break	Proffered Paper 36-38 (08:20-09:50)
10:00		KSHNO Lecture Dong Moon Shin (10:00-10:40)	Guest of Honor's Address (10:00-10:20)	Keynote Lecture 4 Soonmyung Paik (10:00-10:40)	Instruction Course 39 (08:20-09:50)
		Jatin Shah Lecture Jesu E. Medina (10:40-11:20)	Keynote Lecture 1 Jan Vermorken (10:20-11:00)	Keynote Lecture 5 Claudio R. Carneia (10:40-11:20)	Instruction Course 40 (08:20-09:50)
			Keynote Lecture 2 Seiji Kishimoto (11:00-11:40)	Keynote Lecture 6 Vincent Grégoire (11:20-12:00)	Coffee Break
12:00		Luncheon Symposium (Merck Serono) Brazilian Society Symposium 11:20-13:00	Keynote Lecture 3 Uta Tischner (11:40-12:20)		Keynote Lecture 7 Fu-Chan Wei (10:20-11:00)
			Lunch (12:20-13:50)	Luncheon Symposium (J&J) Indian Society Symposium (12:00-13:30)	Keynote Lecture 8 Jeffrey N. Myers (11:00-11:40)
13:00					Closing Ceremony (11:40 - 12:10)
14:00	IFHNOS Governing Council	Panel/Symposium 01-02 13:00-14:30	Poster (T1-01-T1-59)	Panel/Symposium 15-16 (13:30-15:00)	
		Proffered Paper 01-04 13:00-14:30	Poster (T2-01-T2-64)	Proffered Paper 28-31 (13:30-15:00)	
15:00		Panel/Symposium 03-04 14:30-16:00	Panel/Symposium 09-10 (13:50-15:20)	Coffee Break	
		Proffered Paper 05-08 14:30-16:00	Coffee Break		
16:00		Coffee Break	Panel/Symposium 11-12 (15:50-17:20)	Panel/Symposium 17-18 (15:30-17:00)	
17:00		Panel/Symposium 05-06 16:30-18:00	Proffered Paper 20-23 (15:50-17:20)	Proffered Paper 32-35 (15:30-17:00)	
			Instruction Course 11-14 (17:20-18:20)	Instruction Course 21-26 (17:00-18:00)	
18:00					
19:00	Welcome Reception (18:00-20:00)		Gala Dinner (19:00-22:00)	Presidential Dinner (Invited Only) (19:00-22:00)	
20:00					

研討會議程節目一覽包括科學性研討及演講節目與特別或主要演講(內容包括有 12 人次之專輯演講)、選定議題之報告及座談討論會、專題口頭報告、專題海報展示等議程。議程與講授課程介紹(Instructor Course)方面:首爾 IFHNOS 2010 年議程提供頭頸部腫瘤學之 40 節課程議題,包括臨床之演講、研究和教育方面。社會會議討論會(Society Meeting Symposium)方面:這些討論會則由先前承辦 IFHNOS 之主辦國學會組織所負責:Brazilian Society Symposium 與 Indian Symposia on Oral Cancer 等專題。

Panel/Symposium: 包括 “Difficult Decisions in Head and Neck Surgery in 2010”; Human Papilloma Virus; Lymphoma in Head and Neck; Robotic Surgery in Head and Neck Cancer; Precision Radiation Therapy for H&N Cancer; Targeted Therapy in H&N Cancer: Where are we?; Reconstruction in H&N Surgery: Aesthetic and Functional Perspectives; Christopher O’ Brien Memorial Symposium: Cutaneous Malignancy of the Head and Neck; Clinical Relevance of Concurrent Chemoradiotherapy; Revisiting Induction Chemotherapy; Recent Trends in Skull Base Surgery Recent Progress in Management of Neck; Functional Outcome and QOL (quality of life) Salivary Gland Cancer; Molecular Biology in Head and Neck Cancer: Molecular Based Chemoprevention with Natural Compounds in Head and Neck Cancer; Targeted Immunotherapy of Head and Neck Cancer: What have we learned and where are we going?; Regenerative Potential of Head and Neck Cancer - Signaling Cascades in Tumor Stem Cells; Adaptive Immunity and Homeostasis in Head and Neck Squamous Carcinoma等諸次專題。

IFHNOS 2010 年首爾地區組織委員會同時準備在首爾和近郊多處有趣據點提供不同之日程之旅遊導覽,提供給參加研討會者半日或全日選擇性之遊覽資訊,如下圖。

研討會期間建議之旅遊導覽：

Pre-Congress Tour			Daily Tour (15-19, June)							Post Congress Tour			
12	13	14	15	16		17		18	19		20	21	23
PT1 Jeju Island (2N 3D)			HT1 Changdeokgung	HT3 Gyeongbokgung	FT4. DMZ		FT3. Icheon Pottery Village	FT2. Temple Stay	HT1 Changdeokgung	HT3 Gyeongbokgung	FT1. Suwon Hwaseong Fortress	PT1 Jeju Island (2N 3D)	
	PT2 Gyeongju (1N 2D)		HT2 N Seoul Tower	HT2 N Seoul Tower					NT2. Cheongdong Theater	PT2 Gyeongju (1N 2D)			

參、心得及建議

本次世界醫學大會成功圓滿落幕後，President of IFHNOS 2010 Seoul, Kwang Hyun Kim, MD, PhD 與 Chair of the Local Organizing Committee, Chung-Hwan Baek, MD, PhD 立即發送電子郵件感謝函展現主辦單位對本醫學大會之衷心謝意並表示：『我們希望您有一個宜人的旅遊後載譽返家，代表地方學會之組織委員會，我們希望肯定表現出委員會懇切之謝意，及各與會代表對醫學會之巨大貢獻。沒有您對醫學會之參，這次首爾會議是不可能成功的。我們保證這醫學會是重要機遇，大約從 57 個國家的 940 個參加者，針對討論有關在頭頸部腫瘤學在「轉移範例之下題材在頭頸部腫瘤學方面」之重大議題及研究論文發表與經驗分享。』

臺灣頭頸部腫瘤醫學會長期之目標為研究發展頭頸部腫瘤的預防、篩檢、治療、追蹤及支持基礎臨床研究。台灣頭頸部腫瘤醫學會之任務：1.舉辦有關頭頸部腫瘤之學術演講及研討會。2.發行有關頭頸部腫瘤之刊物。3.促進國內外相關學術團體的聯絡與交流。4.推動頭頸部腫瘤相關之教育及研究工作。5.辦理其他相關事宜。頭頸部腫瘤有良性及惡性，範圍涵蓋顏面、鼻咽腔、鼻腔、口腔、咽喉及頸部。本次首爾 IFHNOS 2010 年之探討醫專業領域共區分九大主題涵蓋所有頭頸部腫瘤醫學之範疇，其中口頭報告、專題演講議程與講授課程介紹（Instructor Course）欲聽演講者皆須事先付費註冊取得入場資格，而且多數主題皆與臨床、影像學、手術治療及術後之放射或化學治療之相關性議題，各國與會代表皆有精關之醫學研究討論，其中包括口頭報告十一個研究專題共達 106 篇研究論文報告，醫學專題海報展示共計 181 篇研究論文，因基於個人之病理專科醫師背景相關，僅選擇對頭頸部腫瘤之病因學與致病機轉及腫瘤基因之相關探討較有興趣之課程聆聽，諸如 Evaluation of P16 expression as an Indicator of Response to Concurrent Chemoradiotherapy in Stage IV Squamous Cell Carcinoma of Head and Neck (Preliminary Data-Taiwan), Apoptosis and Expression of AQP5 and TGF- β in the Irradiated Rat Submandibular Gland (Korea), Tumor Susceptibility Gene 101 is An indicator of Poor Survival in OCSCC and Inhibits Invasive Ability of Oral Cancer cells by Suppression of

FLJ10540 Oncogene Expression (Taiwan), Expression of Excision Repair Cross-complementation Group 1 (ERCC1) as a Predictive Marker for Nasopharyngeal Cancer Treated with Concurrent Chemoradiotherapy (Korea), Expression of Embryonic Lethal Abnormal Vision (ELAV)-like Protein HuR associated with Peroxisome Proliferator-Activated Receptors Gamma in Oral Squamous Cell Carcinoma (Korea), Enhancer of Zeste Homolog 2 Expression is Correlated with p53 and Ki-67 in Head and Neck Cancer Using Tissue Microarray (Korea), The Relationship between HPV Status and p16, p53, EGFR Expression in Squamous Cell Carcinoma of Tonsil (Korea), Human Papillomavirus in Oral and Oropharyngeal Squamous Cell Carcinoma: A Risk Factor for Disease - and for Recurrence after Treatment? (Sweden), Nucleophosmin, p53 and Ki-67 Expression Patterns on An Oral Squamous Cell Carcinoma Tissue Microarray (Brazil), S100A8 Expression in Squamous Cell Carcinoma of Oral Cavity (Taiwan), Loss of Heterozygosity of Major Tumor Suppressor Genes (p16, Rb, E-cadherin, p53) in Hypopharyngeal Squamous Cell Carcinoma (Korea), Role Level of Expression Ki-67 and p-53 in Predicting Aggressiveness Tumors of the Salivary Glands in Children(Russian Federation), Nuclear NF- κ B p65 Phosphorylation at Serine 276 by Protein Kinase A Contributes to the Malignant Phenotype of Head and Neck Cancer (India) 等研究主題論文。

關於醫學會地點－首爾是朝鮮半島首都超過 600 年，它是擁有傳統和當代潮流時尚組合之大城市。舉辦醫學會地點位于市中心，並且由歷史宮殿和某些最響譽之摩天大樓環繞在首爾。與會專家學者也將享受可貴之機會與韓國人民之溫暖好客一起體驗韓國烹飪和娛樂文化，同時參觀許多不同的地方特色。

本人非常榮幸能奉國防部軍醫局獲准代表本院參加於 2010 年 6 月 15 日至 19 日在韓國首爾樂天酒店 (Lotte Hotel) 舉辦之第四屆世界頭頸部腫瘤協會聯盟之國際醫學會議【World Congress of International Federation of Head and Neck Oncologic Societies, 2010 (IFHNOS 2010 Seoul)】，個人與三軍總醫院耳鼻喉

部頭頸外科主任王智弘醫師研究合作，以 Adenoid Cystic Carcinoma of the External Auditory Canal（外耳道腺樣囊性癌）之罕見病例為研究專題之海報展示。即如 IFHNOS 2010 年首爾主席 Kwang Hyun Kim, MD, PhD 與地方組織委員會主席：Chung-Hwan Baek, MD, PhD 特別強調於 2010 年乃是以頭頸部腫瘤學方面之轉移範例為其設計主題。2010 年 IFHNOS 於首爾被規劃為一個全球性之壯舉，並且藉此極好盛會讓來自世界各地之高水準之專家和作決策者，提供有關於頭頸部腫瘤處置方面之具有高度價值之訊息。我們進一步期望在外科醫生、放射腫瘤醫師和內科腫瘤醫師及整形外科醫師賡續合作之努力與基礎下，帶來一種重大之改進，諸如其所言喻而圓滿閉幕。

惡性腫瘤常會造成頸部淋巴之轉移，此其中又有百分之八十是由鼻咽腔、鼻腔、口腔、咽喉等原發癌轉移而來」。頸部惡性腫瘤和耳鼻喉科息息相關，耳鼻喉頭頸外科醫師則為其治療之主流。發現有轉移癌，則應先找出原發部位之病變，因此，除耳鼻喉醫師以內視鏡詳細檢視鼻咽腔、口腔、咽喉等處外，找出原發腫瘤做病理切片檢查，更應倚賴病理專科醫師明確之病理診斷與配合找出原因後，再針對原發腫瘤進一步來處理以免影響預後。又如同亞洲頭頸部腫瘤醫學會宗旨為提昇亞洲醫學界對頭頸部腫瘤之瞭解與研究精進充實頭頸部腫瘤之臨床及基礎研究並以促進人民健康及推動國際學術交流。

本次雖僅能參加三天（扣除路程）之半全程會議，然歷經參與世界各醫學界對頭頸部腫瘤之瞭解與研究精進後，可謂獲益匪淺，據個人所知國內對於頭頸部腫瘤之醫療技術與各項醫學研究相較於國外應毫不遜色。但對於國軍醫院之頭頸部外科醫師之人才培養制度中，除三軍總醫院具備醫學中心與擁有上述各專科醫師團隊外，況且目前又瀕臨國軍人力精簡與國防預算編列逐年大幅縮減，各國軍醫院之專科醫師應該仍處於人力不足之醫療資源狀況下，欲爭取參與國際相關醫學會議之預算編列更趨窘境。有鑑於此，本院目前雖正逐年汰舊換新醫療裝備執行術前之評估診斷外，更須積極計畫性培訓頭頸部外科專科醫師、放射診斷

醫學專科醫師，結合病理專科醫師診斷、手術後續放射腫瘤與癌症腫瘤治療等專科醫師之治療計畫，精進執行臨床醫療服務外，同時配合國家衛生政策與從事醫學研究，仍應鼓勵短、長期進修，爭取支持舉辦或積極參加國際醫學會議，以提升及拓展醫學競爭力及符合教學醫院需求，亦是當務之急與重要課題，且更能為病人帶來嶄新又優質之醫療服務。

肆、附錄：IFHNOS 2010 Seoul

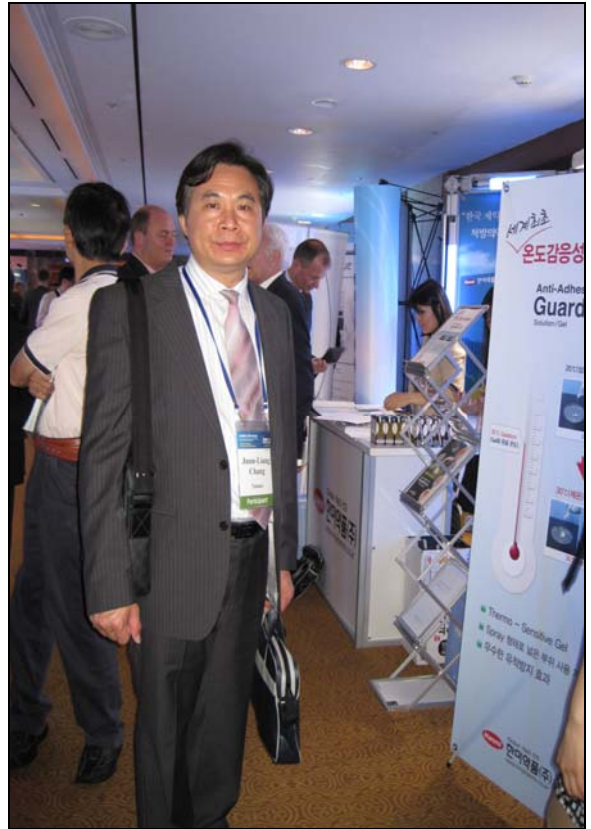
個人參加於 2010 年 6 月 15 日至 19 日在韓國首爾樂天酒店（Lotte Hotel）舉辦之第四屆世界頭頸部腫瘤協會聯盟之國際醫學會議【World Congress of International Federation of Head and Neck Oncologic Societies，2010（IFHNOS 2010 Seoul）】攝影實錄。



攝於 2010 年 6 月 15 日下午於舉辦會議會場報到註冊。



與會期間參加專題演講與專題海報展示之實景。



提供與會期間各國領域醫用儀器展示場區之實景。

與會期間參加專題海報展示之實景



T02-60

TAF Adenoid Cystic Carcinoma of the External Auditory Canal

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 *1 Department of Pathology & Laboratory Medicine, Taoyuan Armed Forces General Hospital, Taiwan, R.O.C.
 #2 Department of Otolaryngology-Head & Neck Surgery, Tri-Service General Hospital, National Defense Medical Center, Taiwan, R.O.C.

Objective
 Adenoid cystic carcinoma occurring in the external auditory canal (EAC) is very rare. One case is being reported.

Methods
 A 78-year-old man who presented with a 5 months history of right-sided intermittent otalgia and ear fullness. Case reports and literatures review concerning the management of EAC adenoid cystic carcinoma tumor are presented.

Results
 An en bloc lateral temporal bone resection, total parotidectomy and selective neck dissection (level I-III) were performed. The defect left over the lateral temporal region was reconstructed by rotation sternocleidomastoid (SCM) muscle and temporalis muscle flap with excellent aesthetic and structural support results. Patient then received the adjuvant radiotherapy. The postoperative course was uneventful after 18 months follow-up.

Figures



Figure 1. A submucosa mass bulging from anterior and posterior aspect of EAC.



Figure 2. Intraoperative photo show lateral temporal bone resection. The outline of the EAC was delineated to prevent from tumor seeding.



Figure 3. (A) En bloc surgical removal of lateral temporal bone. (B) The tumor origin was found located at the superior and posterior aspect of EAC.



Figure 4. Total parotidectomy and lateral neck dissection were performed. The facial nerve was well preserved.



Figure 5. Micrograph showed characteristic cribriform pattern of tumor cells. Perineural invasion was well recognized (H-E stain, X100).



Figure 6. The tumor in the cribriform area contained fibrin material. (H-E stain, X400)



Figure 7. Disease free was maintained for 18 months and excellent aesthetic results was achieved.

Conclusions

- Malignant tumors of the external auditory canal are rare and most are squamous cell carcinoma.
- Adenoid cystic carcinoma (ACC) is a specific variant of adenocarcinomas of the salivary and mucous glands.
- ACC arising in the EAC is exceedingly rare and appear to arise from the ceruminous glands, sweat glands or ectopic salivary gland tissue.
- Contrasting with the low (5%) metastatic potential of cutaneous adenoid cystic carcinomas of other locations, adenoid cystic carcinoma of the EAC present a 50% metastatic risk, similar to those of adenoid cystic carcinoma of salivary glands.
- Therefore, an initial aggressive wide "en bloc" surgical resection is mandatory.

References:

1. Ashava H, Tomason K, Chong Y, et al. Adenoid cystic carcinoma of the external auditory canal: correlation between histological features and MRI appearances. *Br J Radiol*. 1997; 70:529-32.
2. Chang CH, Shu MT, Lee JC, et al. Treatment and outcome of malignant tumors of external auditory canal. *Am J Otolaryngol*. 2006; 29:44-8.
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Figures




Figure 1. A submucosa mass bulging from anterior and posterior aspect of EAC.

2010 6 17

58

T02-60

TAF Adenoid Cystic Carcinoma of the External Auditory Canal

Jian-Liang Cheng, MD, PhD, *Shao-Cheng Liu, MD, **Chih-Hung Wang, MD, PhD,
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**Department of Otorhinolaryngology-Head & Neck Surgery, Tri-Service General Hospital, National Defense Medical Center, Taipei, R.O.C.

Objective
Adenoid cystic carcinoma occurring in the external auditory canal (EAC) is very rare. One case is being reported.

Methods
A 75-year-old man who presented with a 3-month history of right-sided intermittent itchy and ear fullness. Case reports and literature review concerning the management of EAC adenoid cystic carcinoma tumor are presented.

Results
An en bloc lateral temporal bone resection, total parotidectomy and selective neck dissection (level IV-V) were performed. The defect left over the lateral temporal region was reconstructed by rotation sternocleidomastoid (SCM) muscle and temporalis muscle flap with excellent aesthetic and structural support results. Patient then received the adjuvant radiotherapy. The postoperative course was unremarkable after 18 months follow-up.

Figures
Figure 1. Gross specimen showing firm polypoid and nodular aspect of EAC.
Figure 2. Gross specimen shows the lateral temporal bone resection. The defect of the EAC was delineated by tumor bed contour marking.
Figure 3. Total parotidectomy and selective neck dissection were performed. The facial nerve was well preserved.
Figure 4. The patient's ear was reconstructed by rotation SCM muscle and temporalis muscle flap.
Figure 5. Intraoperative view of the external auditory canal. The tumor origin was found located at the superior and posterior aspect of EAC.
Figure 6. The patient's ear was reconstructed by rotation SCM muscle and temporalis muscle flap.
Figure 7. Gross specimen shows the external auditory canal. The tumor origin was found located at the superior and posterior aspect of EAC.
Figure 8. Histopathological features of adenoid cystic carcinoma. The tumor consists of nests and cords of tumor cells. Perineural invasion was also recognized (H&E, 100x).
Figure 9. The tumor is low cellular. Some scattered tumor cells are seen (H&E, 400x).
Figure 10. The tumor is low cellular. Some scattered tumor cells are seen (H&E, 400x).
Figure 11. The tumor is low cellular. Some scattered tumor cells are seen (H&E, 400x).

Conclusions
1. Malignant tumors of the external auditory canal are rare and most are squamous cell carcinoma.
2. Adenoid cystic carcinoma (ACC) is a specific variant of adenocarcinoma of the salivary gland. It is characterized by a cribriform pattern of tumor cells and perineural invasion.
3. ACC arising in the EAC is a rare entity and appears to arise from the mucosal glands, hence gland-in-situ is not always found.
4. Combining with the use of the rotation temporalis muscle and SCM muscle flaps, the external auditory canal can be reconstructed with a good aesthetic and structural support results.
5. Treatment of ACC requires en bloc resection, total parotidectomy, and selective neck dissection.

References
1. Johnson W, Greenberg B, Shetty P, et al. Adenoid cystic carcinoma of the external auditory canal: a case report. *Am J Otolaryngol*. 2004;25:101-102.
2. Cheng JL, Liu SC, Wang CH, et al. Treatment of adenoid cystic carcinoma of the external auditory canal with an en bloc resection and reconstruction. *Am J Otolaryngol*. 2014;35:101-102.
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Figures
Figure 1. A carcinoma tumor arising from superior and posterior aspect of EAC.
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Figure 1. A subcutaneous mass budding from superior and posterior aspect of EAC.



Figure 2. Intraoperative photo shows area of lateral temporal bone resection. The surface of the EAC was liberated to prevent from tumor seeding.



Figure 3. (A) En bloc surgical removal of lateral temporal bone. (B) The tumor origin was found located at the superior and posterior aspect of EAC.



Figure 4. Total parotidectomy and lateral neck dissection were performed. The facial nerve was well preserved.



Figure 5. Micrograph showed characteristic cribriform pattern of tumor cells. Perineural invasion was also recognized (H-E stain, X100).



Figure 6. The lumina in the cribriform areas contained hyaline material (H-E stain, X400).



Figure 7. Tumor free was maintained for 18 months and received adjuvant radiotherapy.

Conclusions

Malignant tumors of the external auditory canal are rare and most are squamous cell carcinoma. Adenoid cystic carcinoma (ACC) is a specific variant of adenocarcinoma of the salivary and mucous glands ectopic salivary gland tissue. Contrasting with the low (8%) metastatic potential of cutaneous adenoid cystic carcinoma of other cutaneous carcinoma of salivary glands. Therefore, an initial aggressive wide "en bloc" surgical resection is mandatory.

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1. Akaiwa H, Tomozaki K, Ohtsuki Y, et al. Adenoid cystic carcinoma of the external auditory canal: comparative histological features and MRI appearances. *Br J Radiol*. 1998; 70:555.
2. Chang CH, Shi MF, Lee JC, et al. Treatment and outcome of the neck tumors of external auditory canal. *Br J Otolaryngol*. 2006; 30:44-8.
3. Dong F, Galley PW, Ho T, et al. Adenoid cystic carcinoma of the external auditory canal. *Otolaryngol*. 2007; 114:104-8.

Preoperative Imaging study and Intracapsular Enucleation for Functional nerve preservation

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Introduction

In treating schwannoma patients, it is critical to determine the origin of the tumor to preserve the nerve function. We evaluated the validity of preoperative imaging studies in distinguishing the neurological origin of the schwannomas of the head and neck, and the efficacy of intracapsular enucleation in preserving the nerve function.

Methods

In 7 cases of schwannomas in the head and neck, we predicted whether the tumor originated from the vagus or the cervical sympathetic chain through preoperative imaging studies including CT and MRI. All patients underwent intracapsular enucleation, and the vagus or the sympathetic nerve was evaluated postoperatively.

Results

Preoperative imaging studies showed schwannomas located between the vagus and the sympathetic chain in 1 and 1 case where it was located between the carotid artery and the vagus nerve (Table 1). At the time of surgery, the origin of schwannoma or the sympathetic chain was confirmed on the last case. Intracapsular enucleation was performed in 6 patients and functional nerve preservation was achieved in 5 (83%).



Figure 3. Operative and specimen (b) of schwannoma patient. Tumor was enucleated preserving the neural pathway (green arrow) using microsurgical technique.



Figure 4. Operative and specimen (d) of schwannoma patient. Tumor was enucleated preserving the neural pathway using microsurgical technique.

Case No.	Origin of schwannoma	Location of schwannoma	Preoperative status	Postoperative status
1	Vagus nerve	Parotid gland	Normal	Normal
2	Sympathetic chain	Parotid gland	Normal	Normal
3	Sympathetic chain	Parotid gland	Normal	Normal
4	Sympathetic chain	Parotid gland	Normal	Normal
5	Sympathetic chain	Parotid gland	Normal	Normal
6	Sympathetic chain	Parotid gland	Normal	Normal

Conclusion

In the head and neck, schwannomas are often found in the parotid gland. Preoperative imaging studies are helpful in predicting the origin of schwannomas. Intracapsular enucleation was performed in 6 patients and functional nerve preservation was achieved in 5 (83%). Thus, we report our treatment results. These results suggest that preoperative imaging studies are helpful in making an accurate diagnosis and functional nerve preservation is effective for preserving the nerve function.


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1. Kim SH, Kim HS, An HS, et al. Schwannoma of the head and neck: a review of 119 cases. *J Korean Otorhinolaryngol Laryngol Assoc*. 2001; 44:101-6.

2. Kim SH, Kim HS, An HS, et al. Schwannoma of the head and neck: a review of 119 cases. *J Korean Otorhinolaryngol Laryngol Assoc*. 2001; 44:101-6.

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Certificate of Attendance
This is to certify that
Dr. Junn-Liang Chang
has attended the 10th World Congress of International Federation of Head and Neck Oncology (IFHNO) on June 11-15, 2012 in Seoul, Korea.



Adenoid Cystic Carcinoma of the External Auditory Canal

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Figures




Figure 1 A submucosa mass bulging from superior and posterior aspect of EAC.




Figure 2 Intraoperative photo show lateral temporal bone resection. The orifice of the EAC was obliterated to prevent from tumor seeding.

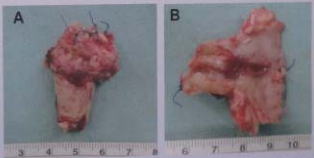


Figure 3 (A) En bloc surgical removal of lateral temporal bone. (B) The tumor origin was found located at the superior and posterior aspect of EAC.




Figure 4 Total parotidectomy and lateral neck dissection were performed. The facial nerve was well preserved.



Figure 5 Micrograph showed characteristic cribriform pattern of tumor cells. Perineural invasion was also recognized (H-E stain, X100).

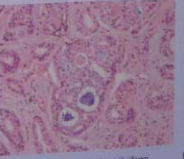


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Figure 7 Disease free was monitored for 18 months and excellent aesthetic results was achieved.

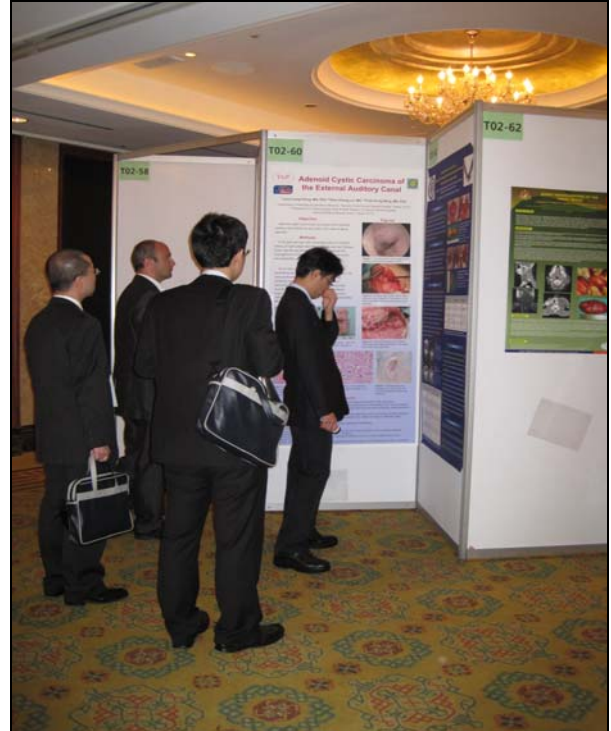
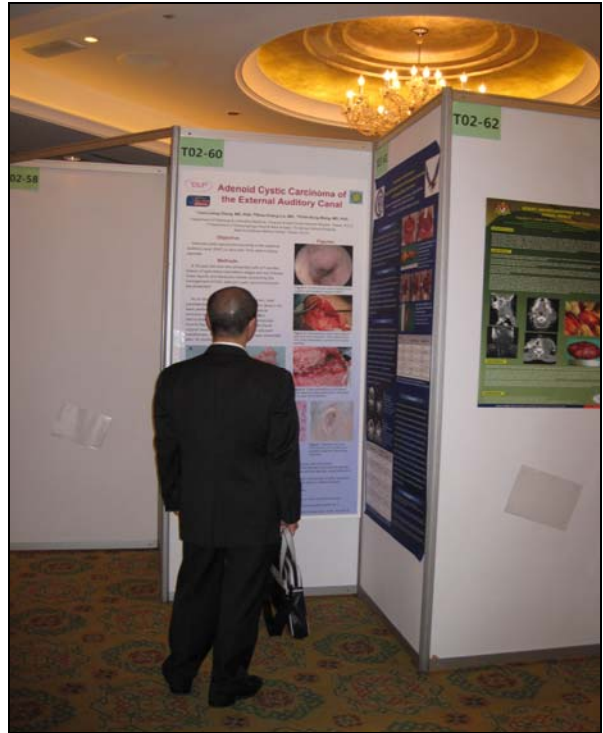
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- Malignant tumors of the external auditory canal are rare and most are squamous cell carcinoma.
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3. Dong F, Gidley PW, Ho T, et al. Adenoid cystic carcinoma of the external auditory canal. *Laryngoscope*. 2008; 118:1581-6.

獲頒參與大會醫學專題海報展示之證明書。



個人代表展示之醫學專題『 Title: Adenoid Cystic Carcinoma of the External Auditory Canal
（外耳道腺樣囊性癌）』之海報展示，頗獲國外醫學領域專家之評論與肯定。