International session 4

IS4-1 The effects of 2 different rules on scoring respiratory event-related leg movements in obstructive sleep apnea patients

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Objective: To compare 2 different scoring rules by American Academy of Sleep Medicine (AASM) and World Association of Sleep Medicine (WASM) for the respiratory event-related limb movements (RRLM) and find differences between 2 scoring rules on diagnostic and continuous positive airway pressure (CPAP) titration polysomnography (PSG) of same patient.

Methods: We retrospectively re-scored RRLM and limb movement (LM) on diagnostic and CPAP titration polysomnography (PSG) in 16 obstructive sleep apnea (OSA) patients. RRLM and limb movement (LM) parameters by manually scoring by AASM and WASM, and autoscoring by AASM rules were compared.

Results: In diagnostic PSG, there were significant differences in LM with arousal (p=0.022), RRLM (p=0.02), and other LM parameters (p<0.05) depending on scoring methods. In CPAP titration PSG, there was a significant difference in RRLM (p=0.007) and LM in REM (p=0.009) depending on scoring method. Manual scoring by WASM overestimated RRLM and LM, especially in severe OSA. Changes of RRLM between diagnostic and CPAP titration PSG were significantly different between autoscoring by AASM and manual scoring by AASM/WASM (p=0.038/0.03), but there was no significant difference between manual scoring by AASM and WASM rules.

Conclusions: Autoscoring with AASM rule underestimated RRLMs compared to manual scoring with AASM and WASM rules on diagnostic and CPAP titration PSGs. Despite intuitive difference of RRLM definition between AASM and WASM rules, RRLM results by manual scoring with 2 rules were not significant.

Curriculum Vitae

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Education
March 1990 – February 1996
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Postgraduate Training
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Korean Society of Otolaryngology Head and Neck Surgery
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Introduction: The aim of the present study was to investigate the usefulness of ApneaLinkTM as a screening test for obstructive sleep apnea through the correlation between ApneaLinkTM and polysomnography.

Subjects and Method: From January 1, 2018 to December 31, 2020, patients who visited the sleep clinic with snoring, sleep apnea, and excessive daytime sleepiness at the otolaryngology department of this hospital were subject to both standard sleep polysomnography and ApneaLinkTM. The correlation between AHI, RDI in standard polysomnography and AHI and RI in ApneaLinkTM was investigated. In order to confirm its usefulness as a screening test for patients with moderate or severe sleep apnea, we tried to confirm the cut-off value of the AHI and RI values of ApneaLinkTM using the ROC curve.

Results: The correlation coefficient between the AHI in polysomnography and the AHI or RI in ApneaLinkTM was both 0.647, showing a high positive correlation. The correlation coefficient between the RDI in polysomnography and the AHI or RI in ApneaLinkTM was both 0.637, showing a high positive correlation. As a result of the ApneaLinkTM AHI test, it was confirmed that the cut-off value was 19 with 76.29% sensitivity and 78.95% specificity, which could be expected to produce more than 15 of RDI in the polysomnography.

Conclusion: Through this study, it was found that ApneaLinkTM can be useful as a screening test for obstructive sleep apnea.
**IS4-3**  The Role of Nasopharyngectomy in the Management of Nasopharyngeal Carcinoma

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Introduction: Nasopharyngeal carcinoma (NPC) is a malignant tumor that arises in the epithelial lining of the nasopharynx. Although most cases respond well with radiotherapy or chemoradiotherapy, there is still 5%~20% of patients develop local recurrence. Recent published data revealed that endoscopic nasopharyngectomy (ENPG) provides promising outcomes compared with intensity-modulated radiation therapy (IMRT) for recurrent NPC. ENPG also avoids severe reirradiation side effects. In this study, we review recent publications on ENPG and highlight the surgical anatomy of ENPG.

Method: We conducted the systemic review of ENPG using PubMed and Cochrane Database. 117 articles were initially identified and their titles and abstracts were examined. Studies that did not pertain to ENPG for NPC, case reports, and studies with less than 10 patients were excluded from the analysis. One cephalus was dissected for demonstrating key anatomical landmarks.

Results: There were totally 19 studies, including two level 2 studies and 17 level 4 studies. Among them, there was only one randomized controlled trial (RCT). Currently available data suggests that ENPG is a promising option for many patients with early-stage local recurrent NPC, with minimal complications. Although selected patients with advanced-stage recurrent NPC may benefit from ENPG, long-term follow-up is needed to evaluate the eventual morbidity from and efficacy of the procedure. Regarding the surgical anatomy, four key anatomical landmarks should be identified to prevent internal carotid artery (ICA) injury: posterior trunk of V3 (parapharyngeal ICA), the cartilaginous part of the Eustachian tube (petrous ICA), and Vidian nerve and pterygospheoid fissures (lacerum ICA).

Conclusion: ENPG is a good option for early local recurrent NPC, with limited complications and promising outcomes. Meticulous preoperative evaluation and a full understanding of the surgical anatomy are important to prevent significant complications such as ICA injury.
International session 4

IS4-1  Metastatic hepatocellular carcinoma in the palatine tonsil and maxillary sinus: a case report and review of the literature

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Introduction:

Extrahepatic metastasis of hepatocellular carcinoma (HCC) is not uncommon in the late stage of the disease. Extrahepatic metastasis of HCC is an indicator of a poor prognosis and the most common sites are lungs, bones, lymph nodes, kidneys and adrenal glands.

HCC metastasizing to the sinonasal cavity are very rare. Based on our literature review, there have been only 17 documented cases of paranasal sinus and 6 nasal cavity metastasis of HCC. There was only one case of metastatic HCC in the palatine tonsil. We presented a case of metastatic HCC in the palatine tonsil and maxillary sinus.

Case report:

A 59-year-old male, who had history of hepatocellular carcinoma (hepatitis B virus carrier) for 10 years. He had been receiving transcatheter arterial embolization, percutaneous ethanol injection therapy, and Sorafenib for HCC, but multiple nodules remained. He visited the emergency department due to massive left nasal bleeding and received foley catheter balloon for posterior nasal packing. Physical examination in head and neck field showed a hypervascularization tumor over left palatine tonsil and a protruding mass from left ostiomeatal complex. Head and neck computed tomography revealed a contrast-enhanced tumor over left nasal cavity, maxillary sinus with bony destruction of medial maxillary and one left palatine tonsil tumor. After emergent trans-arterial embolization for epistaxis, surgical hemostasis and tumor biopsy, pathology revealed metastatic hepatocellular carcinoma of maxillary sinus and palatine tonsil. The patient received palliative treatment due to poor performance status and is still alive 3 months after appearance of nasal/oropharyngeal metastasis.

Discussion:

Reports of HCC metastasis to the head and neck, including the jaw, orbital cavity, and skull are not unusual. However, paranasal and nasal metastases from HCC are very rare. According to our literature review, there have been only 17 documented cases of paranasal sinus and 6 nasal cavity metastasis of HCC. There were only one case of metastatic HCC in the palatine tonsil. The presenting case was the first HCC metastatic to maxillary sinus and palatine tonsil. Epistaxis was the most common symptom. Other less symptoms include diplopia, nasal obstruction and headache. However, these symptoms and signs are common in primary sinonasal tumor, which are non-specific for metastatic tumor. The only clue of metastasis might be a history of a primary tumor elsewhere.

In most reported series of HCC, the male-to-female ratio ranges from 2:1 to 8:1. The tumors in women tend to have less aggressive characteristics than in men, such as smaller mean tumor size, less advanced Okuda stage, and less frequent portal or hepatic vein invasion.

The metastatic route of HCC can be classified as hematogenous or lymphogenous spread. However, according to Nahum and Bailey, they proposed a more probable mechanism of metastasis route to the sinonasal tract via retrograde flow through the prevertebral and vertebral venous plexus.

The prognosis of metastatic HCC in the head and neck region is generally poor and usually died of terminal hepatic failure.

Conclusion:

Sinonasal and palatine tonsil metastasis from HCC is extremely rare and patients usually suffered from non-specific symptoms. The prognosis is generally poor. However, through early detection and aggressive treatment may help to improve quality of life.

Curriculum Vitae
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