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REVIEW ARTICLE

- 441 Diagnostic Approach to Recurrent Bacterial Meningitis in Children**
Huei-Shyong Wang, MD; Meng-Fai Kuo, MD, PhD; Song-Chei Huang, MD
Recurrence of bacterial meningitis in children is potentially life threatening. Bacteria migration, along congenital or acquired pathways from the skull or spinal dural defects gains entrance into the subarachnoid space and should be considered first. It is uncommon for patients with asplenia or immunodeficiency to have recurrent meningitis if there is no history of non-CNS infection. Salmonella meningitis or brain abscess should be treated effectively to avoid recrudescence or relapse which could mimic recurrence. A comprehensive clinical evaluation of children with recurrent bacterial meningitis and the application of modern neuroimaging studies in the prevention of recurrence can not be stated or stressed more cogently.

FORUM

- 453 Epigenetic Methylation of TIMP-3 May Play a Role in HBV-Associated Hepatocellular Carcinoma**
Huey-Jen Lai, MS; Szecheng J. Lo, PhD
Hepatitis B virus (HBV) infection is highly correlated with hepatocellular carcinoma (HCC) and many molecular mechanisms have been proposed. Based on the new data that HCC cell lines containing the HBV genome mostly show tissue inhibitor of metalloproteinase-3 (TIMP-3) repression on both mRNA and protein levels, and on the result of computer analysis of TIMP-3 gene structure, we proposed an alternative model to explain HBV-induced HCC: TIMP-3 transcription might be silenced by epigenetic methylation.

ORIGINAL ARTICLES

- 456 Cephalometric Craniofacial Characteristics in Patients with Temporomandibular Joint Ankylosis**
Ellen Wen-Ching Ko, DDS, MS; Chiung-Shing Huang, DDS, PhD; Yu-Ray Chen, MD; Alvaro A. Figueroa, DDS, MS
The craniofacial morphology of 45 patients with temporomandibular joint (TMJ) ankylosis was analyzed using the lateral cephalograms before treatment. The mandible was the most severely affected as shown by the reduced size as well as the changes in shape and position. Each patient presented a mandible with backward rotation with chin recession. Although the TMJ ankylosis occurred on one side, the overall mandibular growth was reduced. The growth of the maxilla was also restricted. The anterior dental relation was maintained due to dental compensation. The characteristics are offered as guidelines for treating patients with TMJ ankylosis.
- 467 Gastrointestinal Tract Cytomegalovirus Disease in Southwestern Taiwan: A Clinical Study of 1950 Endoscopic Biopsies**
Seng-Kee Chuah, MD; Chi-Sin Changchien, MD; Chung-Mou Kuo, MD; Keng-Liang Wu, MD; King-Wah Chiu, MD; Yi-Chun Chiu, MD; Jien-Wei Liu, MD; Hock-Liew Eng, MD; Shue-Shian Chiou, MD
Gastrointestinal (GI) CMV disease occurs in adult patients with immune suppression. This study reviews and discusses the clinical settings, endoscopic features and locations of gastrointestinal CMV lesions on 1950 endoscopic biopsies from 1999 to 2002 in Chang Gung Memorial Hospital, Kaohsiung. Only those patients found positive for the viral inclusion bodies in the tissue specimens, and further confirmed by special immunohistochemical staining were enrolled. Those patients with lesions of the esophagus and stomach followed a benign clinical course. Rare endoscopic findings of diffuse esophageal CMV disease and severe and extensive colitis were presented. The overall mortality rate was 20% and all but one patient responded well to ganciclovir treatment. GI CMV disease is still rare in Taiwan. High degree of suspicion for CMV disease is important when diagnosing immunosuppressed patients suffering from GI symptoms.

476 Clinical and Endoscopic Features for Alimentary Tract Cytomegalovirus Disease: Report of 20 Cases with Gastrointestinal Cytomegalovirus Disease
Wey-Ran Lin, MD; Ming-Yao Su, MD; Chen-Ming Hsu, MD; Yu-Pin Ho, MD;
Kah-Wai Ngan, MD; Cheng-Tang Chiu, MD; Pang-Chi Chen, MD
We collected 20 patients with GI tract CMV infection with pathologic diagnosis and reviewed the clinical and endoscopic findings. Many patients were immunocompromised. Gastrointestinal bleeding was the most common initial presentation of gastrointestinal CMV disease. The most common feature was multiple ulcers with at least one large ulcer. Endoscopic follow-up in patients with CMV colitis is recommended to check for persistent colitis and strictures.

485 Contrast-Enhanced Carotid Magnetic Resonance Angiography: Comparison of Single-Dose and Double-Dose of Gadolinium Using the Randomly Segmented Central k-Space Ordering Technique
Yu-Chun Lin, RT; Shu-Hang Ng, MD; Jian-Chuan Chen, MS; Alex Mun-Ching Wong, MD;
Yau-Yau Wai, MD
In this study, we compared the single and double-dose contrast enhanced carotid MRA using the contrast-enhanced timing-robust angiography (CENTRA) technique. The CNRs of seven regions of interest in the extracranial carotid and vertebral artery systems were calculated, the delineation of nine vessels and degree of internal jugular venous overlay were evaluated using a 5-point scale. The results showed there were no statistically significant differences in intensity of arterial opacification and image quality between the two groups. We concluded the MRA image quality of extracranial carotid and vertebral arteries were comparable when using a single or double-dose of Gadolinium when the CENTRA technique was used.

492 The Probability of Blindness in Patients Treated for Glaucoma
Li-Chun Chang, MD; Mei-Ching Teng, MD; Hsueh-Wen Chang; Ing-Chou Lai, MD;
Pei-Een Lin, MD; Jen-Chia Tsai, MD
We retrospectively investigated the risk factors and probability of blindness in 172 patients treated for glaucoma. Our results gave a 28.6% probability of blindness at 16 years in at least one eye. An older age poor compliance and a worse visual field on presentation were significant risk factors.

CASE REPORTS

498 Profound Hypoxemia during Major Abdominal Surgery in a Small Infant with Tetralogy of Fallot
Teresa Kit-Man Wong, MD; Shu-Yam Wong, MD; Shih-Chang Tsai, MD;
Yi-Chuan Kau, MD; Jin-Yao Lai, MD
A 2-month-old male infant with tetralogy of Fallot developed a protracted hypoxic event during Soave's endorectal pull-through procedure. The hypoxemia occurred after delivery of the bowel loop out of the abdominal cavity and completely resolved after the intestine was reduced back.

503 Tension Pneumothorax Complicated by Double-Lumen Endotracheal Tube Intubation
Chia-Chun Huang, MD; An-Hsun Chou, MD; Hung-Pin Liu, MD; Chee-Yueu Ho, MD;
Min-Wein Yun, MD
We report on a case of tension pneumothorax which occurred abruptly after double-lumen endotracheal tube (DLT) insertion. Subsequent respiratory and cardiovascular collapse put the patient into a life-threatening situation. We thus emphasize the importance of choosing a correct size and proper placement of DLTs. Also, methods for deciding the size of the DLTs are discussed.

508 Autonomic Dysreflexia Triggered by an Unstable Lumbar Spine in a Quadriplegic Patient
Katie P. Wu, MD; Po-Liang Lai, MD; Li-Fang Lee, MD; Chih-Chin Hsu, MD, PhD
A patient with C5 complete quadriplegia who had L2-L3 pyogenic spondylitis was treated with debridement and fusion of the lumbar spine with grafting. Three months later, autonomic dysreflexia developed whenever he was in an upright position. Roentgenograms revealed absorption of the bone graft at the L2-L3 level. After 8 weeks of antibiotic therapy, a spinal stabilization procedure completely resolved the autonomic dysreflexia.

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