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Non-traumatic Osteonecrosis of the Femoral Head – From Clinical to Bench
Mel S. Lee, MD, PhD; Pang-Hsin Hsieh, MD; Chun-Hsiung Shih, MD; Ching-Jen Wang, MD
Non-traumatic osteonecrosis of the femoral head is the leading cause for the hip joint replacements in many Asian countries including Taiwan. The ultimate goal is the preservation of the involved hip. However, this is often challenging since the early diagnosis is difficult, the etiologies are miscellaneous, the pathogenesis is unclear, and the successful treatment is undetermined. As a consequence, this disease remains to be well-known but not fully-understood. This review is to provide an update of the progress from the clinical studies to the basic bench works on the natural history, risk factors, genetic predilections, diagnosis, staging, and miscellaneous therapeutic modalities.

Surgical Management of Recurrent Nasopharyngeal Carcinoma
Sheng-Po Hao, MD, FACS, FICS; Ngan-Ming Tsang, MD, DSc
Recurrent nasopharyngeal carcinoma (rNPC) can be salvaged with skull base surgery. A multidisciplinary approach improves respectability in locally advanced disease and involves skull base or intracranial extension with reasonable morbidity and mortality. Multivariate analysis indicated that gender, parapharyngeal space involvement, surgical margin, and the modality of adjuvant therapy impact significantly on local control. The impact on survival is indicated by the dura or brain involvement, local recurrence and modality of adjuvant therapy. It is apparent that recurrent NPC patients who underwent surgery had a significantly better survival rate than the re-radiation therapy group.

Prediction of Major Complications after Isolated Coronary Artery Bypass Grafting: The CGMH Experience
Chien-Chao Lin, MD; Meng-Yu Wu, MD; Feng-Chun Tsai, MD; Jaw-Ji Chu, MD; Yu-Sheng Chang, MD; Yoa-Kuang Haung, MD; Kuo-Sheng Liu, MD; Pyung Jing Lin, MD
This paper tried to establish a risk predicting model of major complications after coronary artery bypass grafting (CABG). The reliable EuroSCORE system was used to quantify the preoperative characteristics of each patient. This complication analysis could help surgeons choose the optimal method for patients with different preoperative risks and improve the quality of postoperative care.

The Application of Miniprobe Ultrasonography in the Diagnosis of Colorectal Subepithelial Lesions
Tsung-Hsing Chen, MD; Chun-Jung Lin, MD; Ren-Chin Wu, MD; Yu-Pin Ho, MD; Chen-Ming Hsu, MD; Wei-Pin Lin, MD; Yu-Pin Tseng, MD; Cheng-Hsiung Chen, MD; Cheng-Tang Chiu, MD
Previously, colorectal subepithelial lesions were treated by surgical resection or managed by regular follow up with endoscopy or other types of imaging such as CT without obtaining pathologic information. Endoscopic ultrasonography (EUS) is widely applied for subepithelial lesions (SEL) of the esophagus and stomach. However, this technique is not widely used for SEL of the colon because of the limitations of conventional colonoscopic endosonography. Here, we introduce the miniprobe EUS which can overcome limitations of conventional EUS and can be performed more easily.

Skin Grafting as A Salvage Procedure in Diabetic Foot Reconstruction to Avoid Major Limb Amputation
Jiun-Ting Yeh, MD; Chih-Hung Lin, MD, FACS; Yu-Te Lin, MD
The unstable and critical diabetic patients who want to preserve their infected and necrotic feet are an impossible mission. The patients were highly selected for the preservation of their feet. To avoid major limb amputation, the
preparation period was long and uneven. Patient might need toe amputation or partial foot amputation before reconstruction. Aggressive debridement and various other delicate techniques were carried out to remove the necrotic tissue and avoid bone and tendon exposure till the wound was rich in granulation. At that point an autologous skin graft was applied. We described the key points in the surgical intervention and discussed the basic principles associated with this aspect of diabetic patient care.

The Experience of Parathyroidectomy when Treating Primary Parathyroid Hyperplasia
Ting-Min Hsieh, MD; Cheuk-Kwan Sun, MD, PhD; Fong-Fu Chou, MD
Of fourteen patients undergoing parathyroidectomy for primary parathyroid hyperplasia, eleven received subtotal parathyroidectomy (SP) and three underwent total parathyroidectomy (TP). They were available for clinical evaluation at a median of 98 months after first surgery. Seven SP patients received neck re-explorations and one TP patient underwent forearm graft partial excision for disease recurrence. The 10-year recurrence-free rate was 45% after first surgery. There were significant improvements in both serum calcium and parathyroid hormone levels after re-operation in the eight recurrent cases. However, of the seven patients with neck re-exploration, six developed temporary postoperative hypocalcemia and four sustained recurrent laryngeal nerve palsy because of difficulties during the surgical neck re-exploration. Due to high incidence of disease recurrence and morbidity from neck re-exploration, initial TP seems to be a better option than SP.

Comparison of Developmental Pattern Change in Preschool Children with Spastic Diplegic and Quadriplegic Cerebral Palsy
Chia-Ling Chen, MD, PhD; Kai-Hua Chen, MD; Keh-Chung Lin, PhD; Ching-Yi Wu, ScD; Chung-Yao Chen, MD; Alice May-Kuen Wong, MD; Chia-Ying Chung, MD; Wen-Yu Liu, PhD
A longitudinal study compared the change of developmental patterns in children with spastic diplegic (SD) and quadriplegic (SQ) cerebral palsy (CP). Gross Motor Functional Classification System (GMFCS) levels were classified during the initial assessments, Development quotients (DQs) were evaluated on initial and final assessments. The DQ change indices (%) were calculated. Children with SQ had lower DQs in all developmental functions than those with SD on both assessments. The DQ distributions of developmental profiles were different between the two groups. Most DQs increased with age in children with SD; however, most decreased with age in children with SQ.

Factors Associated with Motor Speech Control in Children with Spastic Cerebral Palsy
Chia-Ling Chen, MD, PhD; Keh-Chung Lin, PhD; Chia-Hui Chen, MEd; Chih-Chi Chen, MD; Wen-Yu Liu, PhD; Chia-Ying Chung, MD; Chung-Yao Chen, MD; Ching-Yi Wu, ScD
This study investigated the factors associated with motor speech control in children with spastic cerebral palsy (CP). Thirty-three children with spastic CP who were able to speak were classified into group A (diplegia or hemiplegia, n = 17) and group B (quadriplegia, n = 16). Each child received assessments of cognition, language, modified Verbal Motor Production Assessment for Children (VMPAC), speech intelligibility, CP subtype and Gross Motor Functional Classification System (GMFCS). Group A had better cognition and language function, higher modified VMPAC scores and better GMFCS levels than group B (p < 0.05). However, speech intelligibility showed no significant difference. Modified VMPAC scores were negatively related to CP subtype (adjusted $r^2 = 0.51$ to $0.63$, $p < 0.001$) and positively related with global language scores and full intelligence quotients (adjusted $r^2 = 0.55$, $p < 0.001$). These findings suggest that motor impairment severity, cognition and language functions are associated with motor speech control of children with CP.

Treatment of Branch Retinal Vein Occlusion Induced Macular Edema in Treatment-naïve Cases with A Single Intravitreal Triamcinolone or Bevacizumab Injection
Chih-Hsin Chen, MD; Yi-Hao Chen, MD; Pei-Chang Wu, MD, PhD; Yung-Jen Chen, MD; Jong-Jer Lee, MD; Ya-Chi Liu, MS; Hsi-Kung Kuo, MD
Both intravitreal injection of triamcinolone acetonide (ivTA) and bevacizumab (ivBe) were effective in reducing central macular thickness and improving visual acuity when treating eyes with macular edema secondary to branch retinal vein occlusion (BRVO) in the short-term. However, ivBe treatment appears to be safer and less prone to adverse side effects such as ocular hypertension and cataract compared with ivTA therapy.

Developmental Profiles and Mentality in Preschool Children with Prader-Willi Syndrome: A Preliminary Study
Chien-Min Chen, MD; Chia-Ling Chen, MD, PhD; Jia-Woei Hou, MD, PhD;
Hung-Chih Hsu, MD; Chia-Ying Chung, MD; Shih-Wei Chou, MD, PhD; Chu-Hsu Lin, MD; Kai-Hua Chen, MD
A majority of the children with Prader-Willi syndrome (PWS) have global developmental delay and mental delay. The aim of this study was to investigate the developmental profiles and mental assessments of preschool children with PWS. The developmental quotients (DQs) of all domains in the PWS group were lower than those of children from the typical development group ($p < 0.01$). Children with PWS had better DQs in the fine motor domain than in the gross motor domain and in the receptive language domain than in the expressive language domain; furthermore their verbal intelligence quotient (IQ) was better than their performance IQ and their mental developmental quotient (DI) was better than their psychomotor DI.

443 Conscious Sedation Reduces Patient Discomfort and Improves Satisfaction in Flexible Bronchoscopy
Yung-Lun Ni, MD; Yu-Lun Lo, MD; Ting-Yu Lin, MD; Yuch-Fu Fang, MD; Han-Pin Kuo, MD, PhD
This prospective case control study enrolled 44 non-sedated and 44 sedated patients who underwent flexible bronchoscopy (FB). Compared to non-sedated patients, those sedated via midazolam and alfentanil had less discomforts and lower verbal analogue scores (VAS, 0-10 scale) on scope insertion (3.5 [0-10] vs. 0 [0-5], $p < 0.001$), cough (5 [0-10] vs. 0 [0-5], $p < 0.001$), dyspnea (3 [0-10] vs. 0 [0-8], $p < 0.001$), pain (3 [0-10] vs. 0 [0-5], $p < 0.001$), and global tolerance of the procedures (5 [1-10] vs. 0 [0-9], $p < 0.001$). More sedated patients expressed willingness to return (70.5% vs. 36.4%, $p = 0.001$). Associated hypoxemic events were all transient. Therefore, conscious sedation during FB improves patient satisfaction despite manageable risks.

453 Physeal Change after Tuberculous Osteomyelitis of the Long Bone in Children
Hsuan-Kai Kao, MD; Wen-E Yang, MD; Hsin-Nung Shih, MD; Chia-Hsieh Chang, MD
Between January 1990 and December 2008, 19 patients with sustained tuberculous osteomyelitis of the long bone with physeal involvement were treated at our institute. The average age was 23.8 months. The patients were followed up for an average of 61.8 months. The most common site of infection was the distal femur (8 patients, 42.1%), followed by the proximal tibia (5 patients, 26.3%) and the distal tibia (3 patients, 15.8%). All patients received surgical treatment and antituberculosis therapy for at least 6 months. Even in cases with extensive surgical curettage through the physis, the growth plate maintained its function and gradually remodeled.

CASE REPORTS

461 Micropapillary Variant of Urothelial Carcinoma: A Report of 4 Cases and Literature Review
Yuan-Tso Cheng, MD; Hau-Lun Luo, MD; Ming-Tse Sung, MD; Po-Hui Chiang, MD, PhD
Micropapillary variant of urothelial carcinoma (MPUC) is an uncommon variant of urothelial carcinoma with high metastatic potential. The cases reported were associated with high grade and advanced stages of the disease at presentation and had a poor prognosis. Four patients were diagnosed with MPUC at our center. Three of the four patients were found to be in the advanced stages of the disease at the time of diagnosis. Although adjuvant chemotherapy was applied, two of them died of metastatic disease. Clinically, MPUC is far more aggressive than conventional urothelial carcinoma (CUC). MPUC should be diagnosed promptly and treated aggressively.

466 Long-term Survivors of Adult Rhabdomyosarcoma of Maxillary Sinus Following Multimodal Therapy: Case Reports and Literature Reviews
Tsung-Han Wu, MD; Jen-Seng Huang, MD; Hung-Ming Wang, MD; Cheng-Hsu Wang, MD; Kun-Yun Yeh, MD
Two adult patients with rhabdomyosarcoma of the maxillary sinus received multimodal therapy and have been free from any local recurrence or distant spread for over ten years. We believe that adequate surgical procedures, planned radiotherapy, aggressive chemotherapeutic agents and the best supportive care for complications may improve the prognosis of patients with this disease.

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472 長庚醫誌投稿須知

本誌榮獲83、85-93年度中華民國行政院國家科學委員會優良期刊獎