

Chang Gung Medical Journal

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REVIEW ARTICLE

- 347 Treatment of Long-Bone Fractures, Malunions, and Nonunions: Experience at Chang Gung Memorial Hospital, Taoyuan, Taiwan**
Chi-Chuan Wu, MD

In this article, principles of treatment of long-bone fractures, malunions, and nonunions are clarified. Current practices which have been published and are representative of the treatment of these issues at the author's institution are reported. Inconsistencies in important viewpoints for fracture-related treatments between the author's institution and published articles are discussed. The aim of this study was to assess the academic level of fracture treatment at the author's institution. Then, improved techniques for fracture treatment can continue to be developed.

FORUM

- 358 Nano- or Submicron-Sized Liposomes as Carriers for Drug Delivery**
Jia-You Fang, PhD

Liposomes are tiny spheres ranging in diameters from 50 nm to several microns. The topical delivery across skin and injectable formulations for anticancer drugs are two examples of liposome application discussed in this article. Only specially designed liposomes have been shown to be capable of achieving enhanced delivery.

ORIGINAL ARTICLES

- 363 Osteoblastic Differentiation of Rabbit Mesenchymal Stem Cells Loaded in A Carrier System of Pluronic F127 and Interpore**
Jau-Wen Huang, MD; Wen-Jer Chen, MD; Shuen-Kuei Liao, PhD; Chuen-Yung Yang, MS; Song-Shu Lin, MS; Chi-Chuan Wu, MD

According to the tissue engineering principle, mesenchymal stem cells (MSCs) combined with an appropriate scaffold can be used as a bone substitute for bone defects or fusion. In this study, Interpore was used as a scaffold and loaded with rabbit bone marrow derived MSCs mixed in hydrogel (Pluronic F127). MSCs in the cell/hydrogel constructs were cultured in an induction medium and osteoblastic differentiation ability was tested using Alizarin Red S stain, reverse transcription polymerase chain reaction, measurement of calcium and alkaline phosphatase levels, and scanning electron microscopy.

- 373 Epidermal Growth Factor Receptor Mutations in Cells from Non-Small Cell Lung Cancer Malignant Pleural Effusions**
Ming-Szu Hung, MD; Chin-Kuo Lin, MD; Shaw-Wei Leu, MD; Mei-Yi Wu, MS; Ying-Huang Tsai, MD; Cheng-Ta Yang, MD

We conducted this study to survey epidermal growth factor receptor (EGFR) mutations in cells from non-small cell lung cancer (NSCLC) malignant pleural effusions and to evaluate the clinical significance. EGFR mutations were detected in 12 of 29 specimens (41%). The frequency of EGFR mutations was significantly higher in gefitinib responders than non-responders. Our results suggest that detecting EGFR mutations in cells from malignant pleural effusions is a feasible adjunct method to finding the subgroup with favorable response to gefitinib therapy among patients with advanced NSCLC.

- 380 Application of A Novel Integrated Pointing Device Apparatus for Children with Cerebral Palsy**
Chia-Ling Chen, MD, PhD; Ching-Yi Wu, ScD; Hsieh-Ching Chen, PhD;

Wei-Hsien Hong, PhD; Wen-Yu Liu, PhD; Alice May-Kuen Wong, MD; Chia-Ying Chung, MD; Hung-Chih Hsu, MD

This study investigates the effectiveness of a newly developed Integrated Pointing Device Apparatus (IPDA) that can integrate numerous commercial pointing devices for children with cerebral palsy (CP). Twenty-seven children with CP quadriplegic were classified into two groups. Group A were able to operate a standard mouse; group B had to use both hands to operate a mouse via IPDA. Group B had a similar level of efficiency in the target-acquisition and drag-and-drop tasks as that of group A. The IPDA can help some children with CP, who cannot utilize a commercial mouse alone, to achieve acceptable operational efficiency.

388 Treatment of Volar Barton's Fractures: Comparison between Two Common Surgical Techniques

Ming-Hsun Dai, MD; Chi-Chuan Wu, MD; Hsien-Tao Liu, MD; I-Chun Wang, MD; Chung-Ming Yu, MD; Kun-Chung Wang, MD; Chih-Hwa Chen, MD; Chi-Hsiung Jung, MD

Twenty-three consecutive volar Barton's fractures, treated with either open reduction and buttress plate fixation (12 cases) or closed reduction with external fixation and percutaneous Kirschner wire fixation (11 cases), were compared retrospectively. After a mean follow-up of 30 months (range, 24-50 months), all fractures healed without major complications. The wrist function was satisfactory in all plating patients (12 out of 12) and nine out of 11 external fixation patients ($p = 0.22$). In conclusion, both surgical techniques give a high success rate.

395 Modified Bowel Preparation to Reduce Infection after Prostate Biopsy

Yun-Ching Huang, MD; Dong-Ru Ho, MD; Ching-Fang Wu, MD; Jia-Jen Shee, MD; Wei-Yu Lin, MD; Chih-Shou Chen, MD

We found a higher infection rate with pre-operative phosphate enema for prostate biopsy at our hospital. Thus, we modified our enema technique with phosphate enema combined with povidone-iodine by doctor at hospital. The infection rate decreased from 9.23% to 0% ($p = 0.001$). Phosphate enema with povidone-iodine at hospital is an effective way to reduce the infection rate for old people who have poor compliance or inaccuracy of self-administered bowel preparation.

401 Gastric Outlet Obstruction in Pediatric Patients

Ju-Bei Yen, MD; Man-Shan Kong, MD

Gastric outlet obstruction (GOO) is rare in pediatric patients. This study reports the etiologies, management and outcome of eleven children with GOO not associated with idiopathic hypertrophic pyloric stenosis in a children's hospital.

406 Clinical Features of Patients Featuring Cataracts in A Myopia-Endemic Area of Taiwan

Chien-Kuang Tsai, MD; Mei-Ching Teng, MD; Pei-Chang Wu, MD; Hsi-Kung Kuo, MD

This study comprised 332 patients (440 eyes) who underwent cataract-extraction surgery, 163 patients (220 eyes) who constituted the presenile cataract study group, and 169 patients (220 eyes) who constituted the senile cataract control group. Each group was divided into idiopathic, diabetic, and highly myopic subgroups. We observed a greater number of cataracts in highly myopic eyes of the presenile group than of the senile group in southern Taiwan, a myopia-endemic area. Nuclear sclerosis principally contributed to most of the presenile cataracts in the highly myopic subgroup.

412 A Retrospective Study of Dental Treatment under General Anesthesia of Children with or without A Chronic Illness and/or A Disability

Chia-Ling Tsai, BDS, MS; Yi-Ling Tsai, BDS, MS; Yng-Tzer Lin, BDS, MS; Yai-Tin Lin, BDS, MS

A retrospective, comparative study was designed to analyze the characteristics of dental procedures performed at Kaohsiung Chang-Gung Memorial Hospital, Taiwan during 2002 under general anesthesia on children with or without a chronic illness and/or a disability. Patients with a chronic illness and/or a disability had a significantly higher average surgical age, received fewer pulpal treatments and fewer stainless steel crowns, and underwent more extractions. Early treatment for children with a chronic illness and/or a disability may improve their dental health and maintain full dentition so as to reduce the subsequent number of teeth extracted.

CASE REPORTS

- 419 Aortic Dissection in A Young Patient without any Predisposing Factors**
Kah-Wai Ngan, MD; Chuen Hsueh, MD; Hung Chang Hsieh, MD; Shir-Hwa Ueng, MD
A 17-year-old male patient, without any predisposing factors, died of massive retroperitoneal bleeding. The autopsy finding was dissection of descending aorta. Microscopically, the aortic sections showed degenerative changes of the aorta, which were unusual in such a young patient. The pathophysiology, predisposing factors and relevant reports in the literature of aortic dissection in young patients are reviewed.
- 424 Sequels, Complications and Management of A Chemical Burn Associated with Cement Splash**
Gerald C S Lim, MD; Lung-Kun Yeh, MD; Hsin-Chiung Lin, MD; Chao-Ming Hwang, MD
We present a case of successful superficial keratectomy and amniotic membrane grafting to re-establish ocular surface from denuded stroma and significant limbal ischemia caused by a cement splash.
- 430 Lower Gastrointestinal Bleeding due to Small Bowel Metastasis from Leiomyosarcoma in the Tibia**
Kun-Chun Chiang, MD; Chun-Nan Yeh, MD; Hsin-Nung Shih, MD; Yi-Yin Jan, MD; Miin-Fu Chen, MD
Here we report on a 50-year-old man who presented with general weakness, body weight loss (six kg in two months) and intermittent tarry stools for two months due to small bowel metastatic leiomyosarcoma from bone. He received segmental resection of the small bowel and a multilobulated mass was noted in the submucosal layer of the ileum with mucosa ulceration. His postoperative course was uneventful. No local recurrence or distant metastases were detected during a six-month follow-up period.
- 435 A Type II First Branchial Cleft Cyst Masquerading as An Infected Parotid Warthin's Tumor**
Meng-Feng Chen, MD; Shir-Hwa Ueng, MD; Shih-Ming Jung, MD; Yao-Liang Chen, MD; Kai-Ping Chang, MD
We present a case of type II First branchial cleft cysts (FBCC) masquerading as an infected parotid Warthin's tumor. We also review the development of FBCCs and their clinical signs and symptoms in order to remind clinicians that this rare branchial anomaly can mimic an infected Warthin's tumor and may be seated in the deep lobe of the parotid gland.
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