

# Chang Gung Medical Journal

## CONTENTS IN BRIEF

### REVIEW ARTICLE

- 201 **Clinical Bioinformatics**  
Phei Lang Chang, MD

### ORIGINAL ARTICLES

- 212 **Squared Titanium Cage in Anterior Cervical Interbody Fusion: A Clinical Experience**  
Chi-Chien Niu, MD; Lih-Huei Chen, MD; Po-Liang Lai, MD; Tsai-Sheng Fu, MD;  
Wen-Jer Chen, MD, PhD
- 222 **Perinatal Outcomes of Polyhydramnios without Associated Congenital Fetal Anomalies after a Gestational Age of 20 weeks**  
Kuang-Chao Chen, MD; Jui-Der Liou, MD; Tai-Ho Hung, MD, PhD; Dong-Ming Kuo, MD;  
Jenn-Jeih Hsu, MD; Ching-Chang Hsieh, MD; T'sang-T'ang Hsieh, MD
- 229 **Outcome Analysis of Patients Requiring Mechanical Ventilation with Severe Community-Acquired Pneumonia and Identified Bacterial Pathogens**  
Han-Chung Hu, MD; Chung-Chi Huang, MD; Ying-Huang Tsai, MD; Cheng-Huei Lee, MD;  
Meng-Jer Hsieh, MD
- 237 **Cumulative Trauma Disorders in Betel Pepper Leaf-Cullers Visiting a Rehabilitation Clinic: Experience in Taitung**  
Lin-Yi Wang, MD; Ya-Ping Pong, MD; Her-Cherng Wang, MD; Sheng-Hsiang Su, MD;  
Chang-hsueh Tsai, MD; Chau-Peng Leong, MD
- 247 **Psychological Distress and Help-Seeking in Patients with Chronic Pain**  
Tsan-Yu Huang, MD; Yu Lee, MD; Mian-Yoon Chong, MD, PhD, FRCPsych

### CASE REPORTS

- 254 **Paraplegia by Acute Cervical Disc Protrusion after Lumbar Spine Surgery**  
Sheng-Huan Chen, MD; Yu-Ling Hui, MD; Chong-Ming Yu, MD; Chi-Chien Niu, MD;  
Ping-Wing Lui, MD, PhD
- 258 **Airway Obstruction by a Metastatic Mediastinal Tumor During Anesthesia**  
Sheng-Huan Chen, MD; Jee-Ching Hsu, MD, PhD; Ping-Wing Lui, MD, PhD;  
Chih-Hung Chen, MD; Ching-Yue Yang, MD
- 264 **Coexistence of a Hemorrhagic Cyst and Carcinoma in the Prostate Gland**  
Ying-Hsu Chang, MD; Cheng-Keng Chuang, MD, PhD; Kwai-Fong Ng, MD;  
Shuen-Kuei Liao, PhD

- 268 **INSTRUCTIONS TO AUTHORS**

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## CONTENTS

### REVIEW ARTICLE

#### 201 **Clinical Bioinformatics**

Phei Lang Chang, MD

Clinical bioinformatics provides medical and biological information to health care professionals. We described the clinical uses of bioinformatics. Clinical bioinformatics has been effectively adopted in genomics, comparative genome analysis, microarray technologies, proteomics, pharmacogenomics, cancer research, systems biology, and medical informatics. This review of clinical bioinformatics testifies to its growing importance in personalized medicine.

### ORIGINAL ARTICLES

#### 212 **Squared Titanium Cage in Anterior Cervical Interbody Fusion: A Clinical Experience**

Chi-Chien Niu, MD; Lih-Huei Chen, MD; Po-Liang Lai, MD; Tsai-Sheng Fu, MD;  
Wen-Jer Chen, MD, PhD

Although autograft is still considered the gold standard graft for cervical interbody fusion, the associated morbidity is considerable. The optimal bone graft substitute, which requires the characteristics of adequate structural support and a reliable fusion result, is still under development. Based on our clinical experience, the trapezoidal titanium-alloy cage provided sufficient mechanical support and stability in the disc space, and was free of notable subsidence of disc height or any other specific complications. An excellent fusion result was achieved due to the porous surface design, and filling the holes of the cage with osteoconductive tricalcium phosphate.

#### 222 **Perinatal Outcomes of Polyhydramnios without Associated Congenital Fetal Anomalies after a Gestational Age of 20 weeks**

Kuang-Chao Chen, MD; Jui-Der Liou, MD; Tai-Ho Hung, MD, PhD; Dong-Ming Kuo, MD;  
Jenn-Jeih Hsu, MD; Ching-Chang Hsieh, MD; T'sang-T'ang Hsieh, MD

Polyhydramnios has a high rate of adverse perinatal outcomes. We evaluated the risks of adverse perinatal outcomes in a large study population with polyhydramnios without associated fetal anomalies after the gestational age of 20 weeks in Taiwan. The presence of polyhydramnios significantly increased the rates of preterm delivery, low birth weight or very low birth weight, low one- and five-minute Apgar scores, fetal death, large for gestational age babies, meconium-stained amniotic fluid, Cesarean section, fetal distress in labor, NICU transfer and neonatal death. Detailed antepartum fetal well-being surveillance, intensive intrapartum monitoring, and further attention postpartum are warranted in these patients.

#### 229 **Outcome Analysis of Patients Requiring Mechanical Ventilation with Severe Community-Acquired Pneumonia and Identified Bacterial Pathogens**

Han-Chung Hu, MD; Chung-Chi Huang, MD; Ying-Huang Tsai, MD; Cheng-Huei Lee, MD;  
Meng-Jer Hsieh, MD

Severe community-acquired pneumonia (CAP) is associated with high mortality. The choice of empirical antibiotics should be guided by the local distribution of bacterial pathogens. We enrolled patients with severe CAP who were intubated with mechanical ventilation in a medical intensive care unit in 2001. A retrospective review of the medical records provided the clinical data. Fifty-nine patients were enrolled. *Klebsiella pneumoniae* was the most-common bacteria (21.3%). Multiple logistic regression analysis revealed that survivors had a significantly younger age and lower acute physiology and chronic health evaluation (APACHE) II scores.

**237 Cumulative Trauma Disorders in Betel Pepper Leaf-Cullers Visiting a Rehabilitation Clinic: Experience in Taitung**

Lin-Yi Wang, MD; Ya-Ping Pong, MD; Her-Cherng Wang, MD; Sheng-Hsiang Su, MD; Chang-hsueh Tsai, MD; Chau-Peng Leong, MD

Betel pepper (*Piper betle* L.) cultivation is an important agricultural industry in Taitung, Taiwan, and culling leaves requires considerable manpower. This case study examines patients with musculoskeletal disorders in a rehabilitation clinic, and results indicated that the proportions of 2 cumulative trauma disorders (CTDs), shoulder impingement syndrome (SIS), and carpal tunnel syndrome (CTS) were higher among betel pepper cullers than among those with other occupations. These CTDs may have resulted from a prolonged static posture and repetitive motions during culling.

**247 Psychological Distress and Help-Seeking in Patients with Chronic Pain**

Tsan-Yu Huang, MD; Yu Lee, MD; Mian-Yoon Chong, MD, PhD, FRCPsych

The purpose of this study is to examine the prevalence of psychiatric morbidity and help-seeking behavior in chronic pain patients. One hundred patients with chronic nonmalignant pain were assessed. Ninety-four percent of subjects had psychiatric morbidity, predominantly depression. More than one third attributed illness to both physical and psychological factor, typical to a pluralistic model of help seeking. Psychiatric intervention is necessary for effective chronic pain management.

## CASE REPORTS

**254 Paraplegia by Acute Cervical Disc Protrusion after Lumbar Spine Surgery**

Sheng-Huan Chen, MD; Yu-Ling Hui, MD; Chong-Ming Yu, MD; Chi-Chien Niu, MD; Ping-Wing Lui, MD, PhD

We present non-traumatic paraplegia secondary to an acute C6-C7 compression in a patient with undiagnosed cervical degenerative disc disease undergoing lumbar spine surgery in the prone position. We suggest that a complete history taking and physical examination be accomplished in patients scheduled for lumbar spine surgery in order to exclude coexisting cervical spine disorders.

**258 Airway Obstruction by a Metastatic Mediastinal Tumor During Anesthesia**

Sheng-Huan Chen, MD; Jee-Ching Hsu, MD, PhD; Ping-Wing Lui, MD, PhD; Chih-Hung Chen, MD; Ching-Yue Yang, MD

We present a case of unexpected airway obstruction that occurred after endotracheal intubation. The obstruction was caused by extrinsic compression of the trachea and main bronchi. After administration of neostigmine to reverse the neuromuscular blockade, the patient resumed spontaneous breathing. Airway obstruction was relieved thereafter. The mechanism and management of this airway compromise caused by mediastinal tumor is discussed.

**264 Coexistence of a Hemorrhagic Cyst and Carcinoma in the Prostate Gland**

Ying-Hsu Chang, MD; Cheng-Keng Chuang, MD, PhD; Kwai-Fong Ng, MD; Shuen-Kuei Liao, PhD

Prostatic carcinoma presenting as a cystic rather than a solid lesion is rare, and most prostatic cystic lesions are benign. Spontaneous hemorrhage of the prostate cyst can result in an elevated level of serum prostate-specific antigen (PSA). We present a case of prostatic cancer coexisting with a spontaneous hemorrhagic cyst and suggest that an elevated serum PSA level should raise the suspicion of malignancy in lesions other than a hemorrhagic cyst.

**268 INSTRUCTIONS TO AUTHORS**

# 長 庚 醫 誌

## 綜 說

- 201 臨床生物資訊  
張慧朗

## 原 著

- 212 梯形鈦合金椎籠使用於頸椎前位椎體間融合的臨床經驗  
牛自健 陳力輝 賴伯亮 傅再生 陳文哲
- 222 懷孕超過二十週合併有羊水過多但無胎兒先天性畸型的周產期預後  
陳光昭 劉瑞德 洪泰和 郭東明 徐振傑 謝景璋 謝燦堂
- 229 需使用呼吸器的嚴重社區型肺炎之致病菌及預後分析  
胡漢忠 黃崇旂 蔡熒煌 李政輝 謝孟哲
- 237 復健門診之荖葉採摘者的重複傷害疾患：台東經驗  
王琳毅 彭亞蘋 王和誠 蘇聖翔 蔡昌學 梁秋萍
- 247 慢性疼痛患者之心理困擾及求助行為  
黃璨瑜 李昱 張明永

## 病例報告

- 254 腰椎手術後因頸椎椎間盤突出導致急性下半身癱瘓  
陳聖桓 許汝寧 余崇銘 牛自健 呂炳榮
- 258 轉移的縱隔腔腫瘤造成麻醉過程中呼吸道阻塞  
陳聖桓 徐至清 呂炳榮 陳志弘 楊靖宇
- 264 前列腺出血性囊腫合併前列腺癌  
張英勛 莊正鏗 吳桂芳 廖順奎
- 268 長庚醫學雜誌投稿須知