

# Chang Gung Medical Journal

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- 16 Hepatitis C Virus Genotypes: Clinical Relevance and Therapeutic Implications**  
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### REVIEW ARTICLES

- 1 Immune Intervention with Monoclonal Antibodies Targeting CD152 (CTLA-4) for Autoimmune and Malignant Diseases**  
 Li-Te Chin, PhD; Chishih Chu, PhD; Han-Min Chen, PhD; Ding-Wei Wang, MD; Shuen-Kuei Liao, PhD  
 CD152 has been considered a sound susceptible candidate in autoimmunity and a persuasive target for cancer immunotherapy for over a decade. Here, we discuss the recent progress and main features of monoclonal antibodies targeting CD152 and examine how each monoclonal antibody (mAb) prepared to a distinct epitope may impact upon CD152 modulation from the perspective of its demonstrated regulatory role acting as an agonist, antagonist, or inverse agonist.
- 16 Hepatitis C Virus Genotypes: Clinical Relevance and Therapeutic Implications**  
 Chuan-Mo Lee, MD; Chao-Hung Hung, MD; Sheng-Nan Lu, MD, PhD; Chi-Sin Changchien, MD  
 In recent years, hepatitis C virus (HCV) -related hepatocellular carcinoma (HCC) has increased in several countries, including Taiwan. The HCV genotypes may play a role in the development of HCC. The HCV genotypes and rapid virological response are predictive of therapeutic response. Recent developments in biotechniques and drugs may elucidate the pathogenesis and the most effective therapeutic response to HCV infection.

### ORIGINAL ARTICLES

- 26 Defining the Carbohydrate Specificities of *Erythrina coralloidendron* Lectin (ECoRL) as Polyvalent Gal $\beta$ 1-4GlcNAc (II) > Monomeric II > Monomeric Gal and GalNAc**  
 Zhangung Yang, MS; Ming-Sung Tsai, PhD; June H. Wu, PhD; Anthony Herp, PhD; Albert M. Wu, PhD  
 The recognition factors of ECoRL, using our collection of ligands and polyvalent natural glycans with known glycotopes, were analyzed. It is concluded that Gal $\beta$ 1-4GlcNAc (II) and other Gal $\beta$ 1-related oligosaccharides are essential for binding. Their polyvalent form in glycoproteins is the most important binding factor for ECoRL, while II monomer and oligo-antennary II forms play a limited role in binding. Although GalNAc binds more strongly to the lectin than Gal, most of its oligovalent forms do not exhibit enhanced binding.
- 44 Effects of Retinoic Acid on Morula-stage Embryo Development in Mice**  
 Fu-Jen Huang, MD  
 Vitamin A and its physiological metabolites, retinoic acid (RA) and other retinoids have profound effects on embryo morphogenesis, cell growth and differentiation, vision and reproduction. In this study, we showed that *in vivo* and *in vitro* exposure of mice embryos at the morula stage to excess RA results in late adverse effects on subsequent development. Retinoid treatment should be avoided at any stage of gestation.
- 52 Primary Intraocular Lens Implantation for Unilateral Idiopathic Cataract in Children**  
 Meng-Ling Yang, MD; Ken-Kuo Lin, MD; Chiun-Ho Hou, MD; Yu-Sung Liang, MD; Jiahn-Shing Lee, MD, PhD  
 Cataract is one of the major causes of childhood blindness, and visual rehabilitation for children with unilateral cataracts remains challenging. We report on our experience of primary intraocular lens implantation for unilateral idiopathic cataracts in children. Based on postoperative refractive development results, we recommend intraocular lens implantation for children with unilateral idiopathic cataracts.
- 59 Pediatric Ocular Trauma in Taiwan**  
 Ching-Hsing Lee, MD; Wan-Ya Su, MD; Lan Lee, MD; Meng-Ling Yang, MD  
 This retrospective review aimed to investigate the demographic, etiologic and prophylactic factors of pediatric ocular trauma in northern Taiwan. A total of 228 children were enrolled. Ocular traumas occurred more frequently in boys. The most common ocular injury was closed globe injury. Falling was the most common cause of ocular trauma. Sharp objects were the most common cause of open globe injuries. Public education, general awareness and aggressive primary management may be indicated to optimize visual outcome.

- 66 Psychiatric Manifestations in Young Females with Congenital Adrenal Hyperplasia in Taiwan**  
Hsin-Yi Liang, MD; Hsueh-Ling Chang, MD; Ching-Yen Chen, MD; Pei-Yeh Chang, MD; Fu-Sung Lo, MD; Li-Wei Lee, MS  
To understand psychiatric manifestations in young women born with congenital adrenal hyperplasia (CAH) in Taiwan, the psychiatric comorbidity, gender identity and sex-typed behavior during childhood of 11 young females with CAH were assessed. Psychiatric needs were found to be unmet. Earlier psychiatric evaluation and intervention for these patients are suggested.
- 74 Hepatosplenic Fungal Infection in Adult Patients with Acute Leukemia**  
Ming-Chun Ma, MD; Ming-Chung Wang, MD; Sung-Nan Pei, MD; Ching-Yuan Kuo, MD  
From 2001 to 2004, 163 adult patients were diagnosed with acute leukemia at our center. Sixteen of these patients (9.8%) developed hepatosplenic fungal infections. All of these patients suffered from febrile neutropenia after chemotherapy. The most common infection sites found by computed tomography were the spleen (94%) and the liver (88%). All patients were treated with antifungal agents. No patient died as a result of the fungal infection episode. Nine patients (56%) died due to uncontrolled underlying hematological malignancies. Infection-related mortality is very low with effective treatment.
- 81 Implantable Cardioverter Defibrillator Therapy: Ten Years Experience in a Medical Center**  
Tien-En Chen, MD; Chun-Chieh Wang, MD; Shang-Hung Chang, MD; San-Jou Yeh, MD; Delon Wu, MD  
Forty-nine cardioverter defibrillator implantations were performed in 46 patients. The patients were followed for a mean  $32 \pm 21$  months. Severe left ventricular dysfunction, enlarged heart chambers, presence of coronary artery disease, prior anterior myocardial infarction, and therapy with amiodarone or diuretics were factors affecting the outcome. Patients with structural heart disease other than ischemic heart disease and dilated cardiomyopathy had a higher event recurrence rate.
- 91 Do Closed-system Hospitals Shift Care under Case Payment? Early Experiences Comparing Five Surgeries in Taiwan**  
Yu-Ping Wen, PhD; Shiow-Ying Wen, PhD  
In this study we examined whether closed-system hospitals responded to the introduction of one type of prospective payment system (PPS), namely, the case-payment (CP) system, and if so, how they responded. Data were derived from a natural experiment conducted in three different Taiwanese hospitals and encompassed five different surgical procedures (N = 22327) to examine the care-shifting effects of the CP system. Ordinary Least Square (OLS) and Poisson regression statistics were used to test the nature of the care-shifting hypotheses. Significant forward shifting of outpatient claims was found during the second year of CP implementation. Our results showed that important institutional effects were associated with the pattern of care-shifting revealed by our study. Despite the shifting occurring during the study period, the average total utilization reduced significantly following the introduction of the CP system.

## CASE REPORTS

- 102 A Successful Live Twin Birth by In Vitro Fertilization after Conservative Treatment of Recurrent Endometrial Cancer**  
Hsien-Ming Wu, MD; Chyong-Huey Lai, MD; Hong-Yuan Huang, MD; Hsin-Shih Wang, MD, PhD; Yung-Kuei Soong, MD  
Endometrial cancer is a disease that occurs primarily in postmenopausal women and is increasingly virulent with advancing age. Endometrial adenocarcinoma in young women is rare. Endometrial cancer is typically treated with hysterectomy. Theoretically, progesterone should reverse the neoplastic process by removing or neutralizing the estrogenic effect. We present a patient with recurrent endometrial adenocarcinoma who received fertility-preserving treatment using megestrol acetate and had a successful pregnancy through in vitro fertilization-embryo transfer (IVF-ET).
- 107 A Case of Gastrointestinal Stromal Tumor with Hyperinsulinemic Hypoglycemia**  
King-Fair Hall, MD; Chia-Li Lin, MD; Tsung-Hsi Wang, MD; Rung-Ho Chang, MD; Han-Ming Chen, MD, PhD  
Gastrointestinal stromal tumor (GIST) is an uncommon malignant tumor with a protean clinical spectrum and unique oncogenic properties. Very few cases of GIST and hypoglycemia have been reported. We report on a rare case of GIST with postabsorptive hypoglycemia, extraordinary hyperinsulinemia and low insulin-like growth factor I (IGF-I). After a complete resection, the symptoms diminished. We point out the unusual endogenous hyperinsulinism, clinical features and postulate possible mechanisms.

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