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REVIEW ARTICLES

229 Direct Activation of Bmi1 by Twist1: Implications in Cancer Stemness, Epithelial-Mesenchymal Transition, and Clinical Significance

Kou-Juey Wu, MD, PhD

A close relationship between cancer stemness and epithelial-mesenchymal transition (EMT) is well documented but without mechanistic explanation. The results of direct activation of *Bmi1* by *Twist1* and their functional interdependence further provide a molecular delineation of the relationship between cancer stemness and EMT. Other aspects such as drug resistance and prognostic prediction related to the *Twist1*-*Bmi1* axis are discussed.

239 Arthroscopy- Assisted Surgery for Tibial Plateau Fractures

Yi-Sheng Chan, MD

The tibial plateau fracture is challenging for orthopedic surgeons because of its severity of trauma, and associated soft tissue injuries. Surgical treatment has evolved and arthroscopy-assisted, minimally invasive surgery is the most attractive treatment of choice among the currently available surgical treatments. The author reviews the current surgical principles, pitfalls, approaches, clinical results, and complications associated with arthroscopy-assisted surgery for tibial plateau fractures. In tibial plateau fractures, satisfactory results could be achieved using arthroscopically assisted osteosynthesis of the fracture combined with arthroscopic management of the associated soft tissue injuries. Arthroscopy-assisted surgery for tibial plateau fractures with associated soft tissue injuries is a safe, reproducible, and effective procedure that provides precise diagnosis and adequate treatment in a one-stage procedure.

ORIGINAL ARTICLES

248 Disrupted Hepatic Adiponectin Signaling Impairs Liver Regeneration of Steatotic Rats

Chun-Yi Tsai, MD; Yann-Sheng Lin, MD; Ta-Sen Yeh, MD, PhD; Chon-Folk Cheong, MD; Chin-Hui Chang, MA; Tse-Ching Chen, MD, PhD; Miin-Fu Chen, MD

Individuals with non-alcohol fatty liver disease (NAFLD) exhibit impaired liver regeneration. Adiponectin signaling is recognized as an important pathway. We feed Sprague-Dawley rats with normal diet (control), high fat diet (HF), and methionine-choline deficiency diet for 1 week (MCD 1W) and 5 weeks (MCD 5W), then they underwent 70% hepatectomy. Hepatic adiponectin of MCD5W and HF increased compared to control; whereas adiponectin receptor type 1 (AdipoR1) and adiponectin receptor type 2 (AdpoR2) were reciprocally decreased compared to control. Reciprocal expression of adiponectin and its receptors in steatotic rats represents a unique form of adiponectin signaling disruption that might be associated with impaired liver regeneration.

260 Tissue Expression of the Hepatitis C Virus NS3 Protein Does Not Correlate with Histological or Clinical Features in Patients with Chronic Hepatitis C

Wei-Hsuan Liao, MD; Shui-Yi Tung, MD; Cheng-Han Shen, MD; Kam-Fai Lee, MD; Cheng-Shyong Wu, MD

The pathogenesis of liver injury by the hepatitis C virus (HCV) is not well understood. Using a reliable immunohistochemical staining method for the NS3 protein of the HCV (HCV-NS3) in liver tissues, the aim of this study was to determine if HCV-NS3 expression was correlated with the serum HCV-RNA load, hepatitis activity, or other clinical parameters. The staining intensity of HCV-NS3 in liver specimens was scored semiquantitatively as 0-3+. The final analysis showed that hepatocyte expression of HCV-NS3 was not correlated with the serum viral load, severity of hepatic injury, or treatment response. Further investigations into the pathogenesis of liver injury by HCV are warranted.

268 The Diagnostic Value of Computed Tomographic Coronary Angiography in Patients with Acute Myocardial Infarction versus Stable Angina Pectoris: A Preliminary Report

Shih-Jen Chen, MD; Li-Tang Kuo, MD; Chao-Hung Wang, MD; Wen-Jin Cherng, MD;

Ning-I Yang, MB, ChB; Chi-Wen Cheng, MD

This study compared the diagnostic values of computed tomographic coronary angiography (CTA) and conventional coronary angiography (CCA) in patients with acute myocardial infarction (AMI) and those with stable angina pectoris. To estimate the severity of coronary artery stenosis, CTA and CCA had concordant correlations in all segments, except in the proximal left anterior descending (LAD) artery. CTA had diagnostic values similar to those of CCA in detecting coronary lesions in patients with AMI or stable angina pectoris. However, a high level of plaque CAC in the stable angina pectoris group may lead to an overestimation of the coronary artery stenotic severity, especially in the proximal LAD arterial segment.

278 The Levels of Stress and Depression among Interns and Clerks in Three Medical Centers in Taiwan – A Cross-sectional Study

Yi-Hsuan Hsieh, MD; Chiao-Ying Hsu, MD; Chia-Yih Liu, MD; Tsan-Lung Huang, MD

An anonymous self-report questionnaire was used to explore the influence of different work circumstances, identity of interns and clerks in hospitals, and gender on levels of stress and depression. When comparing some depressive symptoms and stress sources among medical students, differences of gender and identities were statistically significant, but different work circumstances were not.

286 Comparison between 0.08% Ropivacaine and 0.06% Levobupivacaine for Epidural Analgesia during Nulliparous Labor: A Retrospective Study in A Single Center

Hui-Ling Lee, MD; Liang-Ming Lo, MD; Chung-Chuan Chou, MD; Eng-Chye Chuah, MD

The computer records of 392 nulliparous parturients receiving epidural analgesia were retrospectively reviewed. Of these, 193 received 0.08% ropivacaine and 199 received 0.06% levobupivacaine. Fentanyl (0.0002%) was used in both regimens. There were no significant differences in the mode of delivery, duration of labor, or neonatal outcome between the two groups.

293 An Anatomical Study of the Inferior Oblique Muscle with Emphasis on Its Nerve Entry

Vishal Kumar, MD; B.V. Murlimanju, MD; P. Devika, DNB; Narga Nair, MS; Shakuntala R. Pai, MS; Thejodhar Pulakunta, MD; N.S. Naveen, MD

In the present study, the objectives were to assess the exact location of entry of the oculomotor nerve to the inferior oblique muscle and to study the topographical anatomy of the muscle. This anatomical study included 56 intact orbits from 28 embalmed south Indian adult cadavers. The oculomotor nerve entered the inferior oblique muscle through the orbital surface in 42 (75%) cases, through the ocular surface in 10 (17.9%) cases and through the posterior border in 4 (7.1%) cases. We believe that these findings are important to clinicians who perform ophthalmological surgery and regional anesthesia.

298 Clinical Results of All-inside Meniscal Repair Using the FasT-Fix Meniscal Repair System

Chih-Wei Chiang, MD; Chung-Hsun Chang, MD; Chun-Ying Cheng, MD; Alvin Chao-Yu Chen, MD; Yi-Sheng Chan, MD; Kuo-Yao Hsu, MD; Wen-Jer Chen, MD

This study prospectively evaluated 31 consecutively treated patients to determine the effectiveness and safety of arthroscopic meniscal repair using the FasT-Fix repair system. Follow-up examinations consisted of Lysholm knee score, Tegner activity score and radiographic evaluation. Based on an average of 3 years follow-up, no symptoms of further meniscal tears were found in 30 (96.8%) of the cases. The Lysholm and Tegner activity scores had significantly improved postoperatively. No neurovascular and other major complications were directly associated with the device. Arthroscopic all-inside repair using the FasT-Fix device appears to be a safe and effective procedure.

306 The Characteristics and Distribution of Dental Anomalies in Patients with Cleft

Ting-Ting Wu, DDS; Philip K.T. Chen, MD; Lun-Jou Lo, MD; Min-Chi Cheng, PhD; Ellen Wen-Ching Ko, DDS, MS

This study investigates dental anomalies associated with different types of cleft. The frequency of missing maxillary lateral incisors (MLIs) increased with cleft severity. The trend was opposite for supernumerary teeth and missing lower incisors. No sexual dimorphism was associated with the frequency of peg laterals and missing MLIs, but the distribution pattern of peg laterals and missing MLIs differed between the sexes. The maxillary lateral incisor is the most affected tooth in the cleft area. Outside the cleft area, the maxillary second premolar is the most affected tooth, followed by lower incisor and transposition of the maxillary canines and first premolars.

CASE REPORTS

315 Multiple Cerebral Aneurysms and Brain Metastasis from Primary Cardiac Myxosarcoma: A Case Report and Literature Review

Tsung-Han Lee, MD; Shun-Chen Huang, MD; Thung-Ming Su, MD; Ka-Yen Yang, MD; Cheng-Shyuan Rau, MD

Cardiac myxosarcoma is exceptionally rare and is a distinct disease entity. There is no definite treatment for cerebral metastasis caused by cardiac myxosarcoma. Cardiac myxosarcoma patients who have cardiac surgery to remove the primary cardiac tumor should be followed for neurological symptoms as well as for evidence of cardiac recurrence. The diagnosis of cerebral metastasis and myxomatous aneurysms should be considered in patients with delayed neurological symptoms or signs.

320 Retinal Pigment Epithelial Tear after Intravitreal Triamcinolone Acetonide Injection for Fibrovascular Pigment Epithelial Detachment

Pei-Chang Wu, MD, PhD; Yung-Jen Chen, MD; Hsi-Kung Kuo, MD

A 78-year-old woman was diagnosed with fibrovascular pigment epithelial detachment associated with age-related macular degeneration affecting both eyes. She received 4 mg of triamcinolone acetonide intravitreal by injection into her left eye. One week later, a retinal pigment epithelial tear occurred. Intravitreal triamcinolone acetonide, when used to treat age-related macular degeneration with pigment epithelial detachment, may induce a retinal pigment epithelial tear in the absence of previous or concurrent adjuvant therapy.

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