

## COVERING THE COVER

### **Association of a single nucleotide polymorphism in the TLR2 gene (rs3804099), but not in the TLR4 gene (rs4986790), with *Helicobacter pylori* infection and peptic ulcer**

More than half of the world's population is infected with *Helicobacter pylori*, which is the major cause of gastric and duodenal ulcers. Microbial, host, and environmental factors have been associated with the diverse clinical outcomes associated with *H. pylori* infection. The toll-like receptor (TLR) polymorphism is one of these factors. TLRs play a central role in the initiation of innate cellular immune responses and the subsequent adaptive immune responses to microbial pathogens. Polymorphisms of TLRs may influence the innate and adaptive immune response to the infection, affecting the susceptibility to *H. pylori* or disease outcomes. Several single nucleotide polymorphisms (SNPs) in the TLR2 and TLR4 genes were linked to *H. pylori*-associated gastrointestinal diseases. In this study conducted in Iran, the relationship between the SNP rs3804099 in the TLR2 gene and rs4986790 in the TLR4 gene and *H. pylori* infection and peptic ulcer was investigated. They found that in *H. pylori*-infected individuals, the frequency of the CT genotype at the TLR2 SNP rs3804099 was also significantly higher than in the non-infected healthy subjects. This indicates that rs3804099 in the TLR2 gene may affect vulnerability to *H. pylori* infection. See page 283.

### **Screening for latent tuberculosis infection in patients with inflammatory bowel disease: Can interferon-gamma release assays replace the tuberculin skin test?**

According to the World Health Organization, one-third of the world's population is infected with *Mycobacterium tuberculosis*. Tuberculosis is the ninth leading cause of death worldwide, and screening for latent tuberculosis, either by tuberculin skin test (TST) or interferon-gamma release assay (IGRA), is recommended before commencing immunosuppressive therapies. Individuals who are immunized with bacillus Calmette-Guérin (BCG) or those who are infected with non-tuberculosis mycobacterium (NTM) can have a false positive TST. IGRA represents a diagnostic alternative to the tuberculin test; this solves the problem of sensitization by BCG immuni-

zation and NTM infection. José Luis Cabriada et al. aimed to compare the QuantiFERON-TB and TST in screening for latent infection in patients with inflammatory bowel disease. Their results show that concordance between the two tests was moderate and was higher in immunosuppressant-naïve patients than in immunosuppressed patients. They concluded that QuantiFERON-TB alone may be appropriate in immunosuppressant-naïve patients. See page 292.

### **Assessing the outcome in patients with liver cirrhosis during a hospital stay: A comparison of lymphocyte/monocyte ratio using the model for end-stage liver disease and Child-Pugh scores**

Systemic inflammatory response syndrome occurs relatively common in patients with complicated cirrhosis, and it can deteriorate the liver function, maximize the risk of complications, and increase the mortality rate. The lymphocyte-to-monocyte ratio (LMR), which is one of many inflammatory parameters, has been proposed as an easily accessible and reliable marker. Several recent studies suggest that the LMR is a cheap, readily available, and reproducible test with the potential for predicting clinical outcomes in patients with cardiovascular disease as well as with various malignancies. This study aimed to assess the LMR in comparison with the Model for End-Stage Liver Disease (MELD) and Child-Pugh (CP) scores for determining the outcomes in these patients during a hospital stay. The authors found that the LMR was negatively correlated with both the MELD and CP scores. Patients in the low LMR group showed lower survival rates than those in the high LMR group. This finding suggests that the LMR is easy to calculate and can be used for determining the outcome in patients during a hospital stay. See page 308.

### **Prevalence of advanced colorectal neoplasm is higher in liver transplant recipients**

Liver transplantation (LT) is the treatment of choice for end-stage liver disease, and cancer is a major long-term cause of death in liver transplant recipients. The rate of post-transplant lymphoproliferative disorders and skin cancers is 10- to 30-fold higher than that for the general population. The excess risk of colorectal cancer

(CRC) remains unclear. Studies have investigated CRC in patients with LT, and while some study findings have demonstrated an increased risk, some have not. Eun Ae Kang et al. aimed to investigate whether advanced colorectal neoplasms occur more frequently in liver transplant recipients compared with healthy individuals. They found that the risk of advanced colorectal neoplasia was 3.6 times higher in liver transplant patients, and the risk of developing colon cancer was 8.4 times higher in transplant patients. Therefore, colonoscopy surveillance after LT should be recommended. See page 316.

**Endoscopic papillectomy of benign ampullary lesions: Outcomes from a multicenter study**

Tumors arising from the duodenal papilla account for approximately 5% of gastrointestinal neoplasia. Most of these papillary tumors are benign adenomas, but they are potentially malignant. Therefore, complete resection of a papillary tumor is mandatory even if it is not malignant at the time of presentation. Pancreaticoduodenectomy (Whipple surgery) or radical surgery can be performed for the treatment of papillary tumors. These modalities have high postoperative morbidity and mortality risks. Endoscopic papillectomy (EP) is currently accepted as an alternative therapy to surgery for treating ampullary adenoma. The aim of this multicenter study was to evaluate the feasibility, efficacy, safety, outcome, and impact of EP in the management of benign ampullary lesions. According to results of this study, EP is a safe and effective method and can be considered as a first-line approach for treating patients with benign ampullary lesions with the intent of curing

and also allows for correct histological diagnosis and staging. See page 325.

**The importance of acoustic radiation force impulse elastography in the diagnosis and clinical course of acute pancreatitis**

Acoustic radiation force impulse (ARFI) is a novel and promising elastography modality that is integrated into a conventional ultrasound machine and can quantitatively assess the stiffness of tissues. By short-duration acoustic radiation forces (less than 1 ms), the selected region of interest localizes the displacements without any external compression, and thus the operator dependency is reduced. It could generate focused high-intensity, short-duration acoustic radiation forces by an ultrasound transducer, and the generated wave scan provides qualitative or quantitative responses (shear wave velocity and ARFI values). A higher value of the shear wave velocity indicates that the tissue is stiffer. ARFI has been used for diagnosis of chronic liver, pancreas, kidney, and thyroid diseases and space-occupying lesions in the liver, breast, and thyroid. Kaya et al. aimed to determine the value of ARFI elastography in the diagnosis and the prediction of clinical course of acute pancreatitis (AP). They noted that the mean SWV was significantly higher in the AP group than in the control group. But there was no significant difference noted between patients with and without complications and no significant correlation was noted between the mean SWV value and age, the mean length of hospital stay, and the mean amylase level. Thus, they concluded that ARFI may be a feasible method for diagnosing AP, but it has no value in the prediction of the clinical course of AP. See page 342.