Compilation of Abstracts

Lab Medicine

June - Aug. 2011

SLRC
INTRODUCTION

This compilation of abstracts will serve as a research guide to support faculty and students in their search for recorded literature in selected journals. Full texts of cited articles are available in the LPU S.H.L. Learning Resource Center. Online version if available, may be browsed in the online databases of Academic OneFile with a password.

Should you have comments on this compilation, please call us at 723-07-06 local 113/114 or send message to lpuslrc_main@yahoo.com.
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Importance of the Educational Environment in the Evolution of Celiac Disease

Samasca, G., Iancu, M., Pop, T., Butnariu, A., Andreica, M., Victor, C., & Dejica, D.

**Abstract:** A collision tumor in the central nervous system (CNS) is a rare entity. We report a case of a collision tumor with primary CNS lymphoma and astrocytoma in an otherwise healthy young male and the diagnostic challenge associated with it. The tumor showed 2 histologic patterns. The predominant component consisted of anaplastic astrocytoma with gemistocytic appearance, and the lymphoma cells were kappa restricted B cells with variable cell sizes and some plasmacytoid differentiation. In situ hybridization demonstrated that the lymphoma cells were Epstein-Barr virus (EBV) positive. The patient was neurologically asymptomatic for 2 and half years following surgery, chemotherapy, and radiation.

**Subjects:** 1. Brain Neoplasms -- Diagnosis  
2. Brain Neoplasms -- Pathology, 3. Neoplasms, Second Primary

Abstract: Thrombotic thrombocytopenic purpura (TTP) is a rare disease characterized by platelet consumption in thromboses, leading to a microangiopathic hemolytic anemia (MAHA). Thrombotic thrombocytopenic purpura involves a decrease in the activity of a metalloproteinase, ADAMTS13, which is critical in regulation of the coagulation cascade. This occurs in several conditions, and therefore, TTP is associated with a number of diseases. The decreased activity of ADAMTS13 leads to occlusive platelet thrombi, which can result in a variety of tissue manifestations. Patients normally present with nonspecific symptoms, such as fever and petechia. The classic pentad, although now extraordinarily uncommon, includes thrombocytopenia, MAHA, varying degrees of renal failure, fever, and nonlocalizable neurologic symptoms. We present a rare case in which pancreatitis was the presenting condition.
in a patient with acute idiopathic TTP. We discuss the pathogenesis and etiologies of these 2 diseases.

**Subjects:** 1. Pancreatitis -- Physiopathology
2. Pancreatitis -- Diagnosis, 3. Purpura, Thrombotic Thrombocytopenic -- Physiopathology

Abstract: Background: Our aim was to develop a quantitative real-time polymerase chain reaction (qPCR) assay for the quantitation of hepatitis C virus (HCV) RNA samples from patients infected with different HCV genotypes. Methods: A standard curve was generated by amplification of serial dilutions of HCV-plasmid (pFKI<sub>389</sub>-NS3-3') harboring genotype 1b HCV-subgenomic replicon. Samples from 15 HCV-infected patients (genotypes 1, 2, and 3) were analyzed to quantify HCV-RNA by qPCR with primers and probes specific for the 5'-UTR viral region. Results: The HCV qPCR assay had a sensitivity of 100 copies/reaction with a dynamic range of detection between $10^{-20} \times 10^6$ HCV copies. The assay was highly reproducible with a low coefficient of variation. We observed that the HCV genotypes included could be identified by our method. Conclusions: Our results showed that this modified qPCR assay provides a valid platform for quantifying HCV-RNA,
combining good analytical sensitivity with a wide dynamic range and high reproducibility.

Subjects: 1. Hepatitis Viruses -- Analysis
2. Genotype, 3. Genetics, Microbial, 4. Polymerase Chain Reaction -- Methods

Abstract: Objective: To establish criteria for the most productive use of quantitative cytomegalovirus (CMV) polymerase chain reaction (PCR) in transplant and HIV patients, both for diagnosis and monitoring infections. Method: We evaluated the medical records of 108 HIV, bone marrow transplant (BMT), and solid organ transplant (SOT) patients who had positive CMV viral load tests. Results: Cytomegalovirus was detected at median of 47 and 183.5 days after BMT and SOT, respectively. All HIV patients who had positive CMV viremia had CD4 cell counts <175 cells/μL, and all HIV patients with end-organ disease had CD4 cell counts <75 cells/μL. The median time for CMV to become undetectable after treatment was 22, 21, and 31 days for HIV, BMT, and SOT patients, respectively. Conclusion: Cytomegalovirus viral load screening focusing on high-risk periods may be cost effective. A CMV viral load does not decrease rapidly with
treatment. The CMV PCR for monitoring therapy should not be performed more than once a week.

**Subjects:** 1. Cytomegaloviruses, 2. Transplant Recipients, 3. Polymerase Chain Reaction 4. HIV-Infected Patients, 5. Viremia -- Diagnosis
Abstract: Objective: To screen for the potential protein biomarkers in serum for the diagnosis of lung adenocarcinoma using proteomic fingerprint technology. Methods: Proteomic fingerprint technology combining magnetic beads (SED) with Matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) was used to profile and compare the serum proteins from 138 patients with lung adenocarcinoma and 120 healthy blood donors. Results: A total of 38 discriminating m/z peaks were identified that were related to lung adenocarcinoma (P<0.01). Four differently expressed potential biomarkers were identified with the relative molecular weights of 11644.1Da, 6298.7Da, 5840.4Da, and 3975.2Da, respectively. Among them 2 proteins with m/z 6298.7Da, 3975.2Da decreased, and 2 proteins with m/z 5840.4Da, 11644.1Da increased in lung adenocarcinoma. This diagnostic model can distinguish lung adenocarcinoma from healthy controls with a sensitivity of 92.85% and a
specificity of 91.25%. Conclusions: Biomarkers for lung adenocarcinoma could be discovered in serum by MALDI-TOF-MS combining the use of SED.

Subjects: 1. Lung Neoplasms -- Diagnosis
2. Adenocarcinoma -- Diagnosis, 3. Proteomics
Abstract: Background: There are contrasting reports from different ethnical groups on the role of -1131T>C single nucleotide polymorphisms (SNPs) in the promoter region of the apolipoprotein A5 (APOA5) gene on the development of coronary artery disease (CAD). Here we have studied this association in a sample of the Iranian population. Methods: Seventy-three angiographically confirmed patients with CAD and 55 healthy individuals were entered into this study. The cases and controls were matched for demographic and serum biochemical parameters. Genotyping for the -1131T>C polymorphism of the APOA5 gene was performed using the mismatch polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) method. Results: There was no association between genotype frequencies or frequency of T (major) and C (minor) alleles with CAD. However, presence of the C allele was significantly associated with the risk of development of
hypertriglyceridemia. Conclusion: Our data did not confirm the APOA5 -1131T>C variant as a risk factor for development of CAD in our sample of Iranians.

Subjects: 1. Coronary Disease -- Familial and Genetic
2. Polymorphism, Genetic, 3. Apolipoproteins

**Abstract:** Background: Molecular characterization of glucose-6-phosphate dehydrogenase (G6PD) deficiency variants is essential, especially since the biochemical characterization has lost its significance due to the individual variability. As a result, cases can be misdiagnosed. The present study was designed to determine the incidence of G6PD Mediterranean (Med) mutation among Egyptian children with G6PD deficiency as well as its molecular association with the G6PD 1311T silent polymorphism. Methods: Fifty G6PD-deficient children were subjected to quantitative G6PD enzyme assay. A polymerase chain reaction-amplification refractory mutation system (PCR-ARMS) technique was used to detect the G6PD Med mutation, and polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) was used to assess the associated G6PD 1311T silent polymorphism. Results: G6PD Med was found in 62% and G6PD 1311T polymorphism in 52% of the patients. The association between both mutations was statistically
significant. Conclusion: Glucose-6-phosphate dehydrogenase Med mutation is 1 of the most common mutations causing G6PD deficiency among Egyptian children with G6PD deficiency, with linkage disequilibrium between this G6PD mutation and thymine at nucleotide (nt) 1311.

**Subjects:** 1. Glycogen Storage Disease -- Familial and Genetic, 2. Mutation, 3. Polymorphism, Genetic

Abstract: The isolation of Bacillus anthracis (B. anthracis) from a clinical specimen has the ability to stir a state public health department and all of its counterparts into a colossal windstorm of activity. The organism has been used as an agent of bioterrorism and has the ability to cause severe illness and death. Although neither difficult to grow nor requiring special media, anthrax does require specific methods for confirmation and identification, distinguishing it from other Bacillus species. This article describes the presence of B. anthracis in the United States, the type of infections it causes, and what occurred when a single case of gastrointestinal anthrax was identified in New Hampshire.

Subjects: 1. Anthrax, Gastrointestinal -- Diagnosis
2. Public Health

**Abstract:** Patient: A 40-year-old male with a painless left testicular mass and back painHistory of Present Illness: The patient described a 2-month history of progressive scrotal swelling. He also noted lower back pain that worsened with heavy lifting. The patient denied a history of prior scrotal trauma or surgery. He also noted decreased appetite and an unintentional 20-pound weight loss over the past 2 months. Past Medical History: Mild untreated hypertensionPast Surgical History: NoneFamily History: Non-contributoryPhysical Exam Vital Signs: Temperature, 36.9°C; heart rate, 114 beats per minute; respiratory rate, 16 per minute; blood pressure, 142/97 mmHg. Pertinent physical exam findings included tachycardia, hypertension, mild gynecomastia, a palpable mildly tender midline abdominal mass, and a firm enlarged non-tender left testicle measuring ~10 cm.

**Subjects:** 1. Testis -- Pathology, 2. Hypercalcemia -- Etiology, 3. Diagnosis, Laboratory -- Methods
4. Germinoma -- Diagnosis, 5. Testicular Neoplasms -- Diagnosis

Abstract: Objective: To investigate the performance of the body fluid application on the Sysmex XE-5000. Methods: The XE-5000 accuracy, precision, and analytic measurement range, as well as correlation with standard methods were evaluated using serous, synovial, and cerebrospinal fluids (CSFs). Results: The body fluid application on the XE-5000 showed good precision and correlation with previous methods for nucleated cell counts and RBC counts. Conclusion: Evaluation of the body fluid application on the Sysmex XE-5000 showed significant improvement in the ability of automated hematology analyzers regarding body fluid analysis.

Henemyre-Harris, C. L., & Sakuda, L. S. (2011). Communicating Change to Laboratory Customers. Laboratory Medicine, 42(7), 403-409.

Abstract: The fast-paced world of the clinical laboratory encourages laboratory managers to evaluate and implement technological, process, and workspace changes in an effort to improve testing quality, turnaround time, and customer satisfaction. Managers must remember that even the simplest laboratory change may have a ripple effect throughout the entire hospital and/or medical system. This article describes a 7-step approach to assist laboratory managers in disseminating laboratory change to the appropriate customer at the right time. The approach includes the following steps: 1) identify the laboratory change; 2) target your audience; 3) build a communication team; 4) develop a communication plan; 5) implement the communication plan; 6) evaluate the communication plan; and 7) modify and execute the revised communication plan. A real-world application of the 7-step approach is described using the relocation of the phlebotomy lab for renovation as an example.


**Abstract:** Background: The general prevalence of nosocomial infection is approximately 6.0%, and a disproportionate 20% of these occur in critically ill patients in intensive care units (ICUs) with the attendant morbidity and mortality. Therefore, a study of the bacterial flora on the 70 sampled fomites in our ICU was carried out to ascertain the contributory role of the fomites in the spread of nosocomial infections in that unit. Methods: The samples were inoculated onto dried blood agar, mannitol-salt agar (MSA), and Mueller-Hinton agar (MHA) plates and incubated aerobically at 37°C for 18-24 hours. Results: Overall, 69 (99%) of the cultures yielded growth. The isolates are Staphylococcus aureus (44.3%), coagulase negative Staphylococci (74.3%), and Bacillus alvei (90.0%). Out of the S. aureus isolates, 7 (22.6%) were methicillin-resistant (MRSA). These were isolates from fan switches, X-ray viewing boxes, dwarf partition walls, ventilators, tables, floors, and hand towels. Conclusions: The possible contributory role of fomites in the spread of nosocomial infections in our ICU patients has been demonstrated.

**Subjects:** 1. Cross Infection -- Transmission  
2. Intensive Care Units, 3. Equipment and Supplies  

Abstract: Objective: This study aims to evaluate the performance of PREVI Color Gram system among positive blood culture samples. Methods: A double-blind study was performed on gram smears prepared by the system using either commercial PREVI Color Gram dyes (n=157) or in-house homemade stains (n=167) and compared to the manual gram-stain method using subsequent culture identification as a reference standard. Results: The automatic method using PREVI Color Gram dyes and the manual method showed 99.2% (120/121) agreement with culture results (single organism). The concordant rate of automatic and manual methods with corresponding culture results (multiple organisms) were 96.3% (26/27) and 100% (27/27), respectively. The automatic method using an in-house homemade stain showed 99.3% (138/139) agreement with culture results (single organism), while the manual method was 98.6% (137/139). The automatic and manual methods gave a 91.7% (22/24) concordant rate with culture results (multiple organisms). Conclusions: PREVI Color Gram system can replace a conventional manual gram-stain method on clinical blood culture specimens.

Subjects: 1. Microbiological Techniques, Automated
2. Staining and Labeling -- Methods
Odig, S., Raos, M., Pavić, I., Živčić, J., & Topić, R. (2011). Eosinophil Cationic Protein in Children With Respiratory Allergies - When Is It Useful?. Laboratory Medicine, 42(7), 419-422.

**Abstract:** Background: To assess the differences in serum eosinophilic cationic protein (ECP) concentrations between treated and untreated children with asthma, children with rhinitis, and children with both and possible influence of seasonal exposure to sensitizing allergens on ECP levels. Methods: The study included treated (n=156) and untreated (n=55) children with asthma, children with rhinitis, and children with asthma and rhinitis. Serum ECP was measured in serum collected between 8 am and 12 pm under standardized pre-analytical conditions (regarding the type of blood collection tube, time, and incubation temperature during blood clotting). Results: Untreated children had significantly higher (P<0.0001) concentrations of ECP (M[IQR]=35.1 [29.5-50.9] µg/L) than treated children (M[IQR]=11.3 [7.1-16.1] µg/L). Eosinophilic cationic protein was significantly higher during the allergen exposure season (M[IQR]=23.9 [17.6-40] µg/L) than out of season (M[IQR]=8.3 [5.4-17.2]) µg/L, P=0.0001. Conclusions: To make ECP measurements useful in clinical practices, it is necessary to meet standardized pre-analytical conditions.
Subjects: 1. Immunoproteins -- Diagnostic Use
2. Rhinitis, Allergic, Perennial -- Physiopathology
3. Asthma -- Physiopathology

Level in Parallel With Lack of Associated Genetic Variation in CXCL10 (IP-10) in Southeastern Post-Transfusion Occult HBV-Infected Patients. Laboratory Medicine, 42(7), 423-426.

Abstract: Background: The presence of hepatitis B virus (HBV) DNA in parallel with the absence of a measurable amount of hepatitis B surface antigen (HBsAg) in periphery of hepatitis B-contaminated carriers is characterized as occult hepatitis B infection (OBI). Its clinical status has resulted in multiple drawbacks for blood transfusion services worldwide. Therefore, the aim of the current study was to investigate the association between polymorphisms in -1443 region of C-X-C motif chemokine 10 (CXCL10) interferon-inducible protein-10 (IP-10) and its plasma level in patients with post-transfusion transmitted OBI.

Material and Methods: In this experimental study, plasma samples from 3700 blood donors were tested for HBsAg and anti-hepatitis B core antibody (HBc) by enzyme-linked immunosorbent assay (ELISA). The HBsAg/-anti-HBc+ samples were selected and screened for HBV-DNA by polymerase chain reaction (PCR). Hepatitis B virus DNA-positive samples considered OBI cases, and a polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) was performed to examine the polymorphisms in the CXCL10 (IP-10) gene. The plasma levels of CXCL10 (IP-10) were also detected using ELISA.

Results: The
results of this study demonstrated that 352 (9.5%) out of 3700 blood samples were HBsAg/-anti-HBc+, and HBV DNA was detected in 57/352 (16.1%) of HBsAg/-anti-HBc+ samples. The results of this study also showed that the plasma level of IP-10 was 87.59 ± 8.75 and 143.5 ± 4.83 pg/mL in OBI patients and healthy controls, respectively. Statistical analysis showed the difference was significant (P<0.001). Our results also showed that all of the patients and healthy controls had AG genotypes, while other genotypes were not seen in patients and controls. Conclusion: According to the findings of this study, it can be concluded that OBI patients lack the ability to express adequate amounts of IP-10 that could probably affect the process of HBV clearance.

**Subjects:** 1. Hepatitis B -- Transmission  

Abstract: Hyperglycemia occurs frequently in hospitalized patients and affects patient outcomes, including mortality, inpatient complications, length of stay, and overall hospital costs. Various degrees of glycemic control have been studied and a recent consensus statement from American Diabetes Association (ADA)/American Association of Clinical Endocrinologists (AACE) recommends a target glucose range of 140-180 mg/dL in most hospitalized patients. Insulin is first-line therapy for hyperglycemia as it is adaptable to the changing patient physiology over the course of hospitalization. Critically ill patients should receive intravenous (IV) insulin infusion, and all non-critically ill patients with hyperglycemia should be managed using a subcutaneous (SC) insulin algorithm with basal, nutritional, and correctional dose components. The limiting factor to achieving a near euglycemic state is hypoglycemia. Similar to hyperglycemia, hypoglycemia is an independent risk factor for poor outcomes in the hospitalized patient. Institutions can increase safe insulin use by utilizing insulin algorithms, pre-printed order sets, and hypoglycemia protocols as well as by supporting patient and health care provider education.
Subjects: 1. Hyperglycemia -- Drug Therapy  
2. Patient Care, 3. Glycemic Control, 4. Insulin -- Administration and Dosage
Abstract: The deletion of the short arm of chromosome 18 is considered to be 1 of the most frequently occurring chromosomal aberrations, causing a minimal abnormality visible at birth. It usually becomes more apparent after 3 years. The proband is a 15-year-old male who has had phenotypes manifested mainly by brachycephaly, broad faces, ptosis, downturned corners of the mouth, tooth abnormalities, broad neck with low posterior hairline, tunnel chest, hand abnormalities, mental retardation ranging from mild to severe, and other malformations. In addition, the chromosomal analysis for both parents showed normal karyotypes. Phenotypical features were quite similar throughout other cases and in accordance with the usual phenotype of del (18p) suggested within the same cases and among the del (18p) cases described. The abnormality was clearer with a high resolution chromosomal study, which is the detection of subtle chromosome rearrangement that is only possible if the banding resolution is high enough to permit their visualization.

Subjects: 1. Chromosome Aberrations
2. Abnormalities, Multiple -- Diagnosis

Abstract: Herpes simplex virus (HSV) is the most frequent cause of genital ulcer disease worldwide. It is also 1 of the leading infections among HIV-infected individuals. Though HSV-2 is the principal etiologic agent of genital HSV infections (GH), HSV-1 has increasingly become a more common cause of GH, particularly in those with concurrent HIV. The clinical presentation of HSV in HIV-infected patients is often atypical. Individuals with depressed CD4 T-cell lymphocyte counts frequently present with more severe and protracted GH. Extensive, ulcerated, and necrotic lesions may make for a confusing initial clinical diagnosis. Furthermore, treatment with routine anti-herpetic viral agents may result in failure to resolve infection. Motivated by our recent experience involving an AIDS patient with a difficult-to-diagnose genital HSV infection that proved unresponsive to standard treatment, we review the topic of HSV anti-viral medication resistance with particular attention to its association in the HIV/HSV co-infected patient.

Hicks, D. G., & Schiffhauer, L. (2011). Standardized Assessment of the HER2 Status in Breast Cancer by Immunohistochemistry. Laboratory Medicine, 42(8), 459-467.

Abstract: Immunohistochemistry (IHC) is widely used in surgical pathology, but it has been plagued by problems with reproducibility and lack of standardization resulting in poor concordance between laboratories. In particular, inaccuracy of routine human epidermal growth factor receptor 2 (HER2) testing in breast cancer patients has been a major issue. In 2006 this led the American Society of Clinical Oncologists (ASCO) and College of American Pathologists (CAP) to charge an expert panel with developing recommendations for HER2 testing. After subsequent publication and adoption of these guideline recommendations through dissemination of best practices, variation in clinical practice is expected to diminish and result in improved accuracy. In this article, we review the role of genomic HER2 alterations in the development and treatment of breast cancer, highlight the importance of accurate and reproducible HER2 testing, and discuss practical approaches to standardize HER2 testing by IHC. Pre-analytic and analytic variables are addressed, and a practical algorithm for test interpretation is introduced.


**Abstract:** Background: This study was designed to reevaluate the importance of screening for intestinal parasites in elective surgery patients so as to prevent the complications associated with intestinal parasitism in this group of patients. Methods: The study was carried out in Jos, North Central Nigeria, to determine the prevalence of intestinal parasitism in 130 consecutive elective surgery patients using the direct wet mount and formol ether concentration methods. Results: The overall distribution of intestinal parasites was 31.5%, with the helminthes recording 30.8% while protozoans had 1.5%. Patients for lower abdominal surgery recorded 33.3%, while 24.0% was recorded for the other types of surgery. Hookworms recorded the highest distribution with 17.7% followed by Ascaris lumbricoides with 10.8%, Schistosoma mansoni and Strongyloides stercoralis with 2.3% each, and Entamoeba histolytica/dispar and Trichuris trichiura with 0.8 % each. The age group of 61 years and above had the highest prevalence of 45.5% followed by the 41-50 year age group with 36.4%. The 11-20 and 51-60 year age groups had the least prevalence at 23.1% each. The females recorded a higher prevalence of 37.5% against 31.0% in males. Farmers had 35.3% while civil servants had the least prevalence of 7.1%. Subjects who defecate in toilet pits had a prevalence of 35.5%, closely
followed by those who defecate in bushes and cultivated farmlands with 34.0%. Subjects using the water-closet toilet system recorded only 6.7%. In relation to sources of drinking water, those using water from streams and rivers recorded the highest prevalence of 35.1%, while those using tap water recorded 27.0%. Conclusion: These results emphasize the importance of screening elective surgery patients, especially in endemic areas for intestinal parasites, so as to prevent possible complications associated with intestinal parasites during and after the surgery.

**Subjects:** 1. Preoperative Care, 2. Surgery, Elective
3. Health Screening, 4. Parasites
Abstract: Methods: We evaluated the vancomycin (VAN) minimum inhibitory concentrations (MIC) on methicillin-resistant Staphylococcus aureus (MRSA) strains using MicroScan panel (Pos combo 3.1J). We also used the following 2 methods of preparing the bacterial solution: MicroScan Prompt system (P method) and manual preparation with inoculums adjusted to match a 0.5 McFarland turbidity standard (M method). The Clinical and Laboratory Standards Institute (CLSI) method was used as a reference. Results: On comparing the distribution of VAN MICs, the CLSI and M methods showed a good correlation, while the P method results were higher. Colony counts indicated the final inoculum concentrations from the P method were higher than those from the M method, which were within the ideal inoculum concentration. Comparing the results between the M method with the W/A 96 System (18-hour incubation period) and the M method with a 24-hour incubation period revealed a discrepancy in the detection of some strains with 2.0 μg/mL of VAN. Conclusion: The P method appears to be less reliable than the M method for measuring VAN MIC against
MRSA. Hence, the M method with a 24-hour incubation period should be used instead.

**Subjects:** 1. Methicillin-Resistant Staphylococcus Aureus, 2. Microbial Culture and Sensitivity Tests 3. Vancomycin -- Therapeutic Use

Abstract: Objective: To study the relationship between Taq1B polymorphism of the cholesteryl ester transfer protein (CETP) gene and lipid profile in the Egyptian population. A base substitution from G (B1) to A (B2) in intron 1 of the gene leads to 1 of 3 variants, B1B1, B1B2, or B2B2, at the Taq1B site (5454G>A) (Mutalyzer 2.0 B-6). Materials and Methods: Lipid profile parameters and CETP Taq1B polymorphisms were studied in 30 patients with primary combined hyperlipidemia and in 28 control subjects. The lipid profile was measured. Polymerase chain reaction (PCR) and restriction fragment length polymorphism (RFLP) were used to study Taq1B polymorphisms. Results: The B2B2 genotype was significantly lower in the patient group (13.3%) than it was in the control group (35.7%). No significant difference was found in allelic distribution between groups. In the patient group, the B2B2 genotype showed a higher serum high-density lipoprotein cholesterol (HDL-C) and lower total cholesterol (TC)/HDL ratio than B1B1 and B1B2. In the control group, triglycerides (TGs), TC/HDL ratio, and low-density lipoprotein (LDL) levels were lower in the B2B2 genotype than other genotypes. Conclusion:
There was a suggested association between Taq1B polymorphism of the CETP gene and lipid profile changes, with the B2B2 genotype being protective against hyperlipidemia and atherosclerosis.

Subjects: 1. Hyperlipidemia -- Familial and Genetic
Horvat, R. T. (2011). Diagnostic and Clinical Relevance of HBV Mutations. Laboratory Medicine, 42(8), 488-496.

Abstract: Despite vaccinations, hepatitis B virus (HBV) infections are still very common worldwide. The virus replicates by reverse transcription using a viral polymerase lacking proof-reading ability. This results in the emergence of mutant viruses that can be selected out by host immunity or viral therapeutic agents. Several well-characterized HBV variants have been identified that challenge the effectiveness of the current vaccines. Other mutations result in a change within the HBV surface antigen, resulting in a loss of detection by some diagnostic assays. Additionally, a number of mutations have evolved in response to antiviral therapy. This report is an overview of the HBV mutations leading to vaccine failure, loss of HBV detection by diagnostic assays, increased viral replication, and resistance to antiviral agents.

Subjects:
1. Hepatitis B -- Familial and Genetic, 2. Mutation
3. Hepatitis Viruses

**Abstract:** Objective: We serologically monitored the evolution of patients with celiac disease under a gluten-free diet, in correlation with the family's level of education. Methods: Our study was performed in a representative sample of 50 children with celiac disease, in whom we monitored the evolution of immunoglobulin A (IgA) anti-tissue transglutaminase antibodies (TGA) during 2008-2009. Results: In the children of parents with a primary education (38%), the evolution of IgA anti-tissue TGA was intermittent; in the children of parents with a secondary education (44%), the evolution of IgA anti-tissue TGA was decreased but with many intermittences; and in the children of parents with a higher education (18%), the evolution of IgA anti-tissue TGA was decreasing, without intermittences. Conclusions: The role of a gluten-free diet is not completely understood in the families of children with celiac disease, particularly in those with primary education.

**Subjects:** 1. Celiac Disease -- Diet Therapy  