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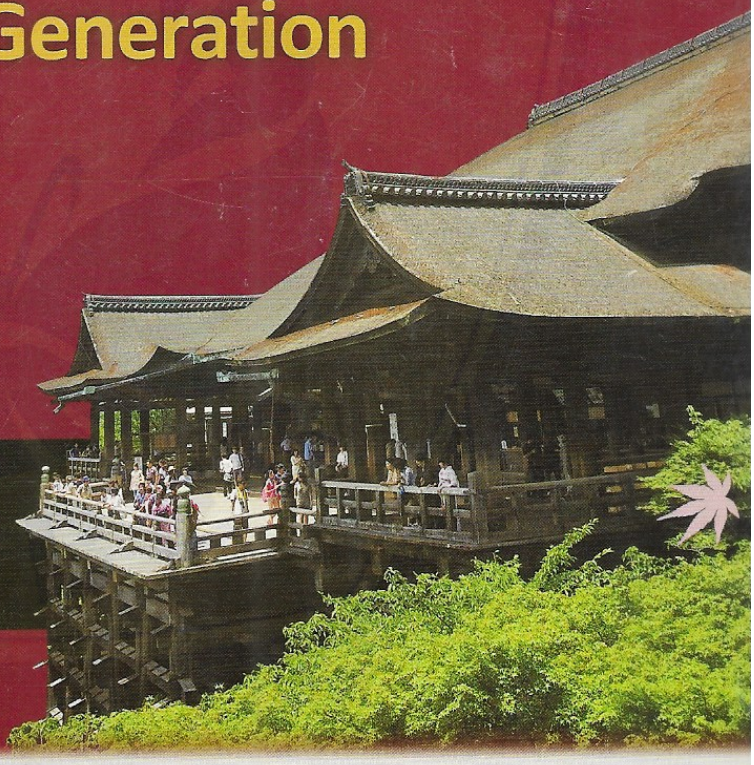
Contribution to Medical Innovation for the Next Generation



Abstract Book

President Masami Murakami, MD, PhD
Professor and Chairman,
Department of Clinical Laboratory Medicine, Gunma University Graduate School of Medicine
President, WASPaLM

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[1]Faculty of Health Science, Gunma PAZ College, Takasaki, Japan, [2]Department of Clinical Laboratory, Hotaka Hospital, Tone-gun, Japan, [3]Gunma University Graduate School of Health Sciences, Maebashi, Japan, [4]NPO Gundaiclub, Maebashi, Japan, [5]Department of Clinical Laboratory, Gunma University Hospital, Maebashi, Japan

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[1]Laboratorium of Clinical Pathology, Medical Faculty of Jember University, Jember, indonesia, [2]Clinical Pathology Department, Dr. Soebandi General Hospital, Jember, Indonesia, [3]Laboratorium of Microbiology, Medical Faculty of Jember University, Jember, Indonesia, [4]Pediatric Department, Dr. Soebandi General Hospital, Jember, Indonesia

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[1]Department of Laboratory Sciences, Graduate School of Health Sciences, Gunma University, Maebashi, Gunma, Japan, [2]Department of Hematology, Gunma University Hospital, Maebashi, Gunma, [3]Blood Transfusion Service, Gunma University Hospital, Maebashi, Gunma

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Kai Pei Huang, Ting-Chung Hung, Li-Ching Wu
Department of Pathology, Chi-Mei Medical Center, Tainan, Taiwan

Introduction: Plasma cell myeloma is one of the most common hematologic malignancies. It's incidence in Taiwan has dramatically increased in recent years. To give reliable reports, our lab make efforts with three approaches. Methods: Firstly, we change the method from agarose gel electrophoresis to capillary electrophoresis. By using this method, we can separate the constituents in serum and type the monoclonal immunoglobulin if it exists. Secondly, we discuss special cases with the clinicians and medical technicians in our lab as well as specialists. Thirdly, we comment on every report to provide the medical team with some suggestions about this case. One of these comments includes a suggestion to clinicians to follow up protein electrophoresis due to an unclear monoclonal gammopathy pattern. Another may involve the display of the quantification of a monoclonal peak to evaluate the patient's prognosis or treatment. Results : 585 reports had been finished in our lab. These cases can be clearly divided into five groups, 23.4% polyclonal gammopathy, 18.5% monoclonal gammopathy, 0.6% oligoclonal gammopathy, 9.3% normal pattern and 48.2% others. Among these cases, there were 26 cases with unclear monoclonal gammopathy pattern; after follow¯up, 12 cases had been developing monoclonal gammopathy. It is worth noting that some cases with a polymerization of immunoglobulin was clarified as two monoclonal immunoglobulins when β¯mercaptoethanol is used. We also learn how to quantify a monoclonal peak by different patterns. Conclusion: Early detection of plasma cell myeloma is urgent. It is a duty for us to take good care of these patients and the above depends on the efforts and coordination between clinicians, specialists and medical technicians.

P8-10 Iron overload effects on liver function, kidney function and hemoglobin in β thalassemia major patients

Rini Riyanti[1,2], Muhammad Ali Shodikin[3,4], Lyanita Tantri[1], Kurnia Elka Vidyarni[1]
1) Laboratorium of Clinical Pathology, Medical Faculty of Jember University, Jember, indonesia,
2) Clinical Pathology Department, Dr. Soebandi General Hospital, Jember, Indonesia,
3) Laboratorium of Microbiology, Medical Faculty of Jember University, Jember, Indonesia,
4) Pediatric Department, Dr. Soebandi General Hospital, Jember, Indonesia

β thalassemia, a hereditary anemia affects multiple organs. Children with β thalassemia major need a regular transfusion to maintain growth and development at normal. They also are at risk of developing severe complications related to post transfusion iron overload, which can be prevented by iron chelation. In Indonesia, transfusion program and iron chelation therapy are regular treatment for them, but we still need to monitor the iron concentration. Because of the damaging effects of iron overload, knowing its effect to kidney, liver, and hemoglobin is needed. The aim was to determine the relationship of serum ferritin levels with AST, ALT, BUN, serum creatinine and hemoglobin and if they can be used as a tool to monitor the health of the patients.
This study used an analytic cross sectional approach and recruited all β thalassemia major patients, who received regular transfusion and iron chelation therapy. This study was conducted at dr. Soebandi General Hospital, Jember, Indonesia in October-November 2016. These samples included 15 patients.
The results was a significant correlation between serum ferritin levels with AST (p=0.013). No significant correlation was obtained between serum ferritin levels with ALT (p=0.080), serum ferritin levels with BUN (p=0.795) and serum ferritin levels with serum creatinine (p=0.537). And also there is negative correlation between serum ferritin levels with hemoglobin (t count=3.192, r count =-0.7966 and r^2=0.63).
The conclusions is a significant relationship between elevated levels of serum ferritin to AST and low hemoglobin. But there is no significant relationship between elevated levels of serum ferritin to ALT, BUN and serum creatinine.
Keywords : β thalassemia major, ferritin, AST, ALT, BUN, serum creatinine, hemoglobin