

OP 7 THE DRAMATIC SHOSHIN BERIBERI

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INTRODUCTION

Between December 2015 and March 2016, hospitals in the Klang Valley, Malaysia received a number of patients with similar extreme presentation followed by dramatic recovery. Ten cases from three institutions were studied and their diseases progress was analyzed. It revealed an almost forgotten disease, which requires high index of suspicion to diagnose yet, cheap but highly effective medicine to treat.

CASE REPORT

Ten Burmese males whose age ranging from 22 to 41 years old presented with worsening shortness of breath associated with abdominal pain and vomiting. Eight patients had been under detention for seven to ten months for being illegal immigrants. Eighty percent of patients were in shock and respiratory distress with severe metabolic acidosis, requiring intubation and haemodynamic support. Majority of them also had acute kidney and liver injuries. Point of care echocardiography revealed severe dilatation of the right heart with pericardial effusion. Diagnosis of Shoshin Beriberi was subsequently made and all patients were treated with high dose of intravenous thiamine. Dramatic recoveries were observed in 90.0 percent of patients with reversal of the heart, kidneys and liver injuries.

DISCUSSION

Shoshin Beriberi is a forgotten disease in some part of the world. It is

due to thiamine deficiency that affects cells metabolism leading into low output cardiac failure. The diagnosis relies on high index of suspicion based on the history and clinical presentation as well as the dramatic improvement after thiamine administration. Difficult access to thiamine-enriched meals for more than three months increases the risk of the disease. Burmese male has the risk of developing the disease possibly due to their habits and lifestyle.

CONCLUSION

Thiamine has an important role in cardiac dysfunction of unknown origin. Awareness must be instilled among detention centres and prisons as prevention of Shoshin Beriberi is better and cheaper than the cure.

OP 8 STUDY ON USAGE OF BEDSIDE ULTRASONOGRAPHY IN DETECTING PLASMA LEAKAGE AMONG DENGUE PATIENTS IN EMERGENCY DEPARTMENT

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INTRODUCTION

Dengue provides a diagnostic challenge to health care providers, especially in ensuring rapid diagnosis to reduce the morbidity. One of the most important parameters depicting dengue severity is evidence of plasma leakage; hence prediction of plasma leakage in dengue is vital. Bedside ultrasonography is an attractive tool that can be used to detect evidence of plasma leakage, detecting free fluid in

potential space and evidence of gall bladder wall thickening, hence providing another armamentarium towards establishing dengue diagnosis and severity.

OBJECTIVE

The objective of the study was to address the accuracy of diagnosis and dengue severity categorization using ultrasonography without depending on laboratory index.

METHODOLOGY

A prospective study carried out from September 2015 to March 2016. All adult patients between the age of 18- 65years old with history of fever and positive NS1 or serology IG G or IGM was recruited in the study. All patients underwent protocolized bedside ultrasonography conducted by certified providers which include sonographic assessment of gall bladder wall, pleural cavity, peritoneal cavity and pericardial space. Bedside ultrasound was done upon patient arrival, and the assessment is repeated after 60 minutes if the first assessment was negative. The sensitivity (Sn), specificity (Sp), positive predictive value (PPV) and negative predictive value (NPV) of ultrasonography in detecting plasma leakage was analyzed. Result was tabulated in SPSS VERSION 24

RESULT

A total of 364 patients recruited and 228 had positive ultrasonography findings. 172 out of 228 (75.4%) was subsequently diagnosed as severe dengue with findings such as ascites/pleural effusion and/or gallbladder (GB) wall thickening. 56 out of 228 (24.6%) who was initially diagnosed as non severe dengue were found to have positive ultrasonography findings, 28

(50%) them progressed to severe dengue. Patient whom came with dengue fever with warning sign 122 out of 228 (53%) has positive ultrasonography findings, 94 (77.0%) patients progressed into severe dengue. Fifty severe dengue patients whom came with no clinical sign or symptom suggestive of plasma leakage found to have positive ultrasound findings. Sensitivity and specificity gallbladder wall edema was more pronounced in severe than in non-severe dengue patients and often preceded ascites/pleural effusion as the p value showed >0.001. The negative predictive value (NPV) of plasma leakage at Morrison's pouch his 85.5%, NPV at splenorenal is 84.6% and NPV at rectovesicle is 82.4%. As for sensitivity (Sn) and specificity (Sp), fluid collection at retrovesicle pouch has a Sp of 89% and Sn 4.9%. This showed high specificity but very poor sensitivity. Meanwhile GB thickening showed specificity of 74.9% and NPV 86.3% which is highest among all other plasma leakage site. Pleural effusion also showed high specificity 79.8% and NPV 84%, but pericardial effusion showed high sensitivity 96.6% and low specificity with 83.7% negative predictive value. Gall bladder thickening noted more pronounce on the day 3-6 of illness in 93 patients, the diameter varied from 4.00mm-4.95mm. The GB wall diameter is >5.0mm in patient whom presented with combination (multiple sites) of plasma leakage such as gall bladder thickening and/or ascites and/or pleural effusion). When combining bedside ultrasonography with lactate showed to have p value of 0.00. Gall bladder thickening with raised haematocrit have p = 0.001.

CONCLUSIONS

Ultrasound is reliable prognostic and diagnostic tools in identifying plasma leakage, hence predicting the severity of diseases and progression of the diseases. Its also shown that when bedside ultrasound findings is combined with POCT result, the sensitivity and predictive values of diagnosing and classifying dengue severity is further enhanced. This is in contrast to using existing laboratory markers in isolation. Henceforth, such patients with evidence of plasma leakage should be managed as severe dengue and merits for intensive care monitoring to minimize the complication.

OP 9 GENETIC VARIANTS THAT ARE ASSOCIATED WITH NEUROPSYCHIATRIC SYSTEMIC LUPUS ERYTHEMATOSUS: A META- ANALYSIS

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OBJECTIVE

While genetic risks have been implicated in systemic lupus erythematosus (SLE), the roles of various genotypes in neuropsychiatric SLE remain uncertain. The present meta-analysis aimed to combine data from different studies and evaluate the association between each genotype and the risk of developing NPSLE.

METHODS

Studies were searched and retrieved from online databases (PubMed, EMBASE, BIOSIS and Science Direct). Case-control studies containing available genotype frequencies of the gamma Fc region (FCgR) receptors II-A, III-A, and III-B; tumour necrosis factor- α (TNF- α); mannan-binding lectin (MBL); integrin alpha M (ITGAM); interleukin-1 (IL-1), IL-1 β , and IL-6; IL-10 promoter; and vitamin D genes were chosen. The odds ratio (OR) with a 95% confidence interval (CI) was used to assess the strength of this association between NPSLE and SLE patients.

RESULTS

A total of 33 studies were considered in this meta-analysis. The results suggest that the homozygous FCgR IIIa 158 FF genotype (OR=1.89, $p=0.03$ for FF vs VV=FV), heterozygous FCgR IIIb NA1/2 genotype (OR=2.14, $p=0.03$ for NA1/2 vs NA 1/1; OR=1.81, $p=0.04$), and homozygous ITGAM rs1143679 HH genotype (OR=3.39, $p=0.04$ for HH vs RH; OR=3.11, $p=0.048$, for HH vs RR+RH) demonstrated a significant association with NPSLE. Polymorphisms of the TNF- α , MBL2, IL-1, IL-1 β , IL-6, IL-10 promoter and vitamin D receptor genes did not show a statistically significant association with the risk of developing NPSLE ($p>0.05$).

DISCUSSION

This meta-analysis indicates that polymorphisms in the pathways of immune complex clearance, such as the Fc γ RIIIa, Fc γ RIIIb and ITGAM genotypes, are potential susceptibility genes for NPSLE.