

may be a viable option when RV-c must be done to reach timely RV-c-PEP treatment tolerance and avoid hypersensitivity reactions.

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307. Could We Predict Severe Rickettsiosis?

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Background. *Rickettsiosis* has long been considered as a benign affection. Pathologic mechanisms and prognosis factors of severe forms are incompletely decrypted. In this perspective, we aimed to determine the predictive factors of a severe rickettsiosis (SR).

Methods. We conducted a retrospective and prognostic study including all patients with documented rickettsiosis hospitalized between 1993 and 2016. SR was defined by the presence of renal, neurological, cardiac, splenic, and/or pancreatic disorder. Cox proportional hazard regression analysis was used to reveal the independent factors affecting the prognosis of rickettsiosis.

Results. We studied 336 cases of rickettsiosis. The mean age was 42.4 ± 16 years and sex ratio (M/F) was 1.1. There were 73 cases with SR (21.7%). Among SR, there were renal forms in 51 cases (69.8%), neurological and/or cardiac involvement in respectively 28 cases (38.3%) and 11 cases (15%). Six patients with SR have required intensive care (8.2% vs. 0.4%; $P = 0.001$). Advanced age was a risk factor of SR (49.2 ± 17 vs. 40.6 ± 16 years; $P < 0.001$). Comorbidities were significantly more common in SR (36.4% vs. 23%; $P = 0.03$; HR = 1.9). Clinical signs associated with SR were purpura (11% vs. 3%; $P = 0.01$; HR = 3.9), splenomegaly (9.7% vs. 3.8%; $P = 0.04$; HR = 2.7) and chorioretinitis (9.7% vs. 3.4%; $P = 0.037$; HR = 3.1). Thrombocytopenia < 100 G/L was significantly more frequent in SR (44.4% vs. 27.3%; $P = 0.005$; HR = 2.1) and serum sodium was significantly lower (132 ± 5 vs. 134 ± 4 mmol/L; $P = 0.002$). Patients with SR were treated with doxycycline in 51.4% (vs. 66.2%; $P = 0.02$; HR = 0.5). The median-free complications survival was estimated of 20 days (CI95% 15–23 days). Multivariate Cox regression analysis showed that advanced age (HR = 1.02; CI95% 1.008–1.036; $P = 0.002$) and thrombocytopenia < 100 G/L (HR = 1.68; CI95% 1.01–2.7; $P = 0.042$) were the independent prognosis factors of predicting SR.

Conclusion. Rickettsiosis remains an emerging infection in our country. Although its natural evolution is often favorable, serious outcomes deserve an intensive and early management based on adequate antimicrobial drugs. Future studies are needed to analyze deeply prognostic profile of rickettsial diseases.

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308. Endothelial Injury and Oxidative Stress in Patients with Schistosomal Hepatic Fibrosis: Relation to Renal Dysfunction and Hemodynamics

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Background. Schistosomiasis mansoni is associated with immune-mediated glomerulopathy; however, the mechanism of renal involvement is not well established. Endothelial injury plays an important role in the pathogenesis of chronic renal diseases and may be related to oxidative stress. The present work was designed to study markers of endothelial injury and oxidative stress in patients with schistosomal hepatic fibrosis (SHF) in relation to renal dysfunction and hemodynamics.

Methods. Forty-five patients with SHF (15 without albuminuria, 15 with mild/moderate albuminuria, and 15 with severe albuminuria) and 15 healthy subjects were included in the study. Endothelial injury was assessed by plasma von Willebrand factor (vWF) activity and serum angiotensin converting enzyme (ACE) levels. Serum malondialdehyde (MDA) levels and 24-hour urinary levels of leucine aminopeptidase (LAP) were measured as markers for oxidative stress and tubular damage respectively. Renal hemodynamics were assessed using Duplex-Doppler ultrasonography by calculating the diastolic/systolic renal flow velocity ratio (d/s), intrarenal resistive index (RI), and hilar renal blood flow (RBF).

Results. Patients with SHF showed significant increases in plasma vWF activity, serum levels of ACE and MDA, urinary LAP levels and RI and significant decreases in d/s and RBF compared with healthy subjects ($P < 0.05$). The increase in plasma vWF activity and the changes in renal hemodynamics were positively correlated but were not related to the severity of glomerular injury ($P > 0.05$). Serum MDA and urinary LAP levels were significantly higher in patients with albuminuria than in patients without albuminuria while serum ACE level was significantly higher in patients with severe albuminuria than in other patients ($P < 0.05$). There was a significant positive correlation between serum MDA levels and severity of liver disease in patients with SHF ($P < 0.05$).

Conclusion. Endothelial injury, possibly due to oxidative stress, may play an important role in the pathogenesis of renal dysfunction and increased renovascular impedance in SHF and in the initiation of schistosomal nephropathy in this disease.

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309. Assessing Clinical Diagnosis of Sexually Transmitted Infections Among Women Initiating Contraceptive Implants in Kingston, Jamaica

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Background. Clinical diagnosis of sexually transmitted infections (STIs) may result in misdiagnosis of certain infections. Syndromic approaches are currently the standard practice for STI assessment in Jamaica.

Methods. In order to assess potentially missed STIs, we compared clinically diagnosed STIs to laboratory-confirmed gonorrhea (GC), chlamydia (CG), and trichomonas (Tvag) using data and specimens previously collected for the Sino-Implant Study (SIS) in Jamaica. SIS was a clinical trial that randomized 414 women to receive a levonorgestrel implant at either baseline or three months post-enrollment, in order to evaluate unprotected sex after implant initiation. Available vaginal swab samples ($N = 254$) were tested for GC, CT, and Tvag by Aptima Combo 2 assay for CT/NG and Aptima Trichomonas vaginalis assay (Hologic, San Diego, CA). Clinically diagnosed STIs were categorized as cervicitis or vaginitis, excluding herpes simplex virus, human papilloma virus and yeast infection, and were determined from medical records by assessing clinical impressions and prescriptions. Log-binomial regression models fit with generalized estimating equations were used to estimate associations of clinically diagnosed STIs with laboratory-confirmed diagnoses and demographic and behavioral characteristics.

Results. Overall, 195 (76.8%) women had a laboratory-confirmed STI (CT, GC, or Tvag) while only 65 (25.6%) women had clinically diagnosed cervicitis and/or vaginitis during the study period. Clinical diagnosis missed 79.7% of cases of laboratory-confirmed STI: 85% of GC, 78.8% of CT, and 80.0% of Tvag. Hormonal contraception in the month prior to the study visit was associated with clinical diagnosis of cervicitis and/or vaginitis at any time point (PR: 1.65, 95% CI: 1.07, 2.54). Younger age was significantly associated with missed infections (PR: 0.98 per year increase, CI: 0.97, 1.00).

Conclusion. The prevalence of laboratory-confirmed STIs was much higher than what was captured by clinical diagnosis among the study participants. GC, CT, and Tvag were not accurately detected by this approach, particularly among younger women. Increased laboratory capacity for STI surveillance and refinement of the syndromic approach are needed.

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310. Where's the Eschar?: Non-Eschar Cases and Eschar Distribution between the Serotypes of Karp, Irie/Kawasaki and Hirano/Kuroki Causing Scrub Typhus in Fukushima, Japan

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Background. Scrub typhus (ST) is endemic in Fukushima, where the highest number has been reported from 2006 to 2011 in Japan. Lack of the triad (fever, rash and eschar) in the clinical features of ST makes the diagnosis difficult especially without eschar. Although genitalia or axillae must be examined carefully as overlooked part of physical examination, the distributions of eschars in the serotypes of ST remain unclear.

Methods. We reviewed the clinical features of the patients diagnosed as ST in adults from 2008 to 2016 at Ohta Nishinouchi General Hospital, a major teaching hospital in Fukushima, Japan.

Results. Total 51 cases (serotype Karp 24, Irie/Kawasaki 19, Hirano/Kuroki 8) of ST were confirmed by elevated specific IgM and IgG in the paired sera and the positivity by real-time PCR analysis of eschars. Non-eschar cases were found in 5/51 (9.8%): one of Karp, one of Irie/Kawasaki and three of Hirano/Kuroki. Two eschars were found in a case of Irie/Kawasaki. Total 47 eschars were found in the diagnosed cases. In terms of sex differences, eschars from abdomen to thighs including genitalia were found 4/17 (24%) in men and 17/30 (57%) in women, which is more than twice as high than men. In contrast, eschars in lower extremities from calves to feet were found 5/17 (29%) in