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### Chlamydia and gonorrhea screening in the ED setting: increasing evidence of utility and need for further research



I applaud the work of Garlock et al. in investigating the utility of chlamydia (CT) and gonorrhea (GC) screening in emergency departments (ED). In the time of record levels of these infections and the specter of antimicrobial resistant gonorrhea (AMR GC) on the horizon, new means to identify and treat those at risk are sorely needed [1–3].

I would like to point out that somewhat similar work has been done before, and complements to a large extent the findings presented by this study. Two of our previous studies of prospective screening of emergency department patients found both relatively high rates of infection and individual-level factors suitable to refine screening criteria. The first study of universal urine-based screening of females aged 15–35 years for CT/GC found a disease prevalence of 9.1% (CT only 5.7%; GC only 2.5%; CT and GC 0.9%) [4]. Further, restricting screening to only those “...reporting 2+ male partners in the past year or those who thought their sex partner had other partners resulted in a 52% decrease in the number of tests administered and a 73% increase in screened patient prevalence.” Our second universal screening study, including males and oropharyngeal swabs in addition to urine specimens, found an overall prevalence of 7.7% with similar risk between males and females [5]. Further, 26.3% of infected individuals had an oral infection, and the majority of oral GC infections would not be identified with urine-based screening. Both of these studies were pilots at a single hospital site and require further exploration.

The clinical setting (primary and emergency) has been and will likely continue to be a critical aspect of addressing sexually transmitted disease screening and treatment [6,7]. Still, universal screening in relatively low prevalence settings is not generally considered cost-effective [8].

As Hull et al. describe in their review, there are multiple factors impacting both cost-effectiveness and even full implementation of current guidelines [8]. Of particular concern for emergency department-based screenings is the potential loss to follow up, leading to presumptive treatment as a frequently-preferred paradigm. While efficient from an operations perspective, it is unattractive in terms of waste, potential for inadequate treatment (for those truly infected), and adverse personal and social outcomes (for those not infected). Whereas the primary care setting has an established framework for long-term patient

engagement and follow up, none such exists in the emergency setting. Models of linkages between ED-based screening and other agency follow up and treatment have been explored, and I would suggest that further study in this regard is warranted [9,10]. While truly new strategies for addressing increasing rates of STDs and AMR GC are needed, expanding and refining evidence-based practices in existing clinical sites may be comparably low cost and easily generalized.

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### Red cell distribution width and mean platelet volume in carbon monoxide poisoning



Dear Editor,

We read the article “Predicting of neuropsychosis in carbon monoxide poisoning according to the plasma troponin, carboxyhemoglobin (COHb), red cell distribution width (RDW) and mean platelet volume (MPV) levels” by Coskun et al. [1] They aimed to determine the predictivity of neuro psychosis in carbon monoxide poisoning by the admission levels of RDW, MPV and troponin I levels which can be measured quickly and easily in the emergency department (ED). They

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concluded that RDW and MPV can be helpful for risk stratification of neuropsychosis in carbon monoxide poisoning. This study gives important information on this clinically relevant condition.

A complete blood count is a comparatively routine, cheap, practical and easy examination method that gives important information about inflammation. [2] MPV as a part of platelet function is a commonly used inflammatory marker related to many clinical conditions. [3] In this respect, Coskun et al. [1] have mentioned that demographic, clinical, and laboratory data from the date of presenting to the ED due to CO poisoning, including the COHb, RDW, MPV, neutrophil, lymphocyte and troponin levels, were assessed using review of the hospital's medical records. In accordance with the recent article, [1] MPV and RDW levels were obtained medical records. However, these parameters can change many conditions. At present, increased MPV levels were observed in coronary artery diseases, atrial fibrillation [4], cerebrovascular disease, peripheral artery disease, stroke, malignancy, inflammatory diseases [5], all of them are strongly correlated with endothelial dysfunction on the basis of inflammation [6]. Also, medications like aspirin, statins that may affect the MPV values should also be reported with medications of the patients. [7] Moreover, the authors did not mention about the type of the tube (EDTA or citrate) which contains blood collection material. It is clearly known that MPV levels rise over time in EDTA-anticoagulated samples. The MPV levels increase up to 30% within five minutes of exposure with EDTA and increases further by 10 to 15% over the next two hours with impedance technology. So, the ideal time of MPV measurement is about two hours after blood sample collection in EDTA tube. [7] Also, EDTA generates a small shape change and swelling in platelets, so that the MPV measured in citrated blood can differ from that assessed in EDTA blood of the same donor. [8]

In addition, RDW, another marker of the complete blood count parameters, represents the variability in the red blood cell volume distribution and can be considered an index of heterogeneity in size of circulating erythrocytes. [9] This parameter is readily measured by automated hematology analyzers and reported as a component of complete blood count. [10] RDW has recently been defined to highly correlate with short- and long-term outcomes in different clinical settings. [11] However, RDW may reflect ethnicity, neurohumoral activation, renal dysfunction, thyroid disease, hepatic dysfunction, nutritional deficiencies (i.e. iron, vitamin B<sub>12</sub>, and folic acid), bone marrow dysfunction, inflammatory diseases, chronic or acute systemic inflammation [12], recent transfusion within the past 3 months and use of some medications. Last but not least, it would be better if the authors might define how much time they specified on measuring RDW levels, because of the delaying blood sampling can cause abnormal results in RDW measurements.

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## Letter to the Editor Regarding Article, “Esmolol reduces apoptosis and inflammation in early sepsis rats with abdominal infection”



Dear editor,

We have read with interest the article by Lu et al. [1] published in *American Journal of Emergency Medicine*, and thought that some issues should be addressed.

Lu et al. [1] reported that the rats were randomly divided into a sham-operated control group, sepsis group, antibiotic group and esmolol + antibiotic group. They suggested that sham-operated control group with 5 rats, while experimental group with 10 rats in each group.

After reading this article carefully and consulting some relevant literatures, the purpose of the authors were investigated whether esmolol can alleviate the combined organ dysfunction caused by sepsis. According to Jacquet-Lagrèze et al. [2], we thought that their experimental animals are more suitable to randomly assign to five groups: sham-operated control group, sepsis group and esmolol group, which is further divided into low dosage (L group), medium dosage (M group) and high dosage (H group) esmolol groups. Moreover, to control the unrelated variables, we thought it may be better that the number of animals in their control group is consistent with the experimental group with 10 rats, which is like most experimental studies.

As we all know, the experimental method has great influence on the result. Therefore, although the article has been published for more than one year, in order to improve quality to make it more readable, we propose to correct this error.

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