

Hello!

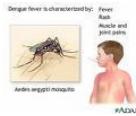
Did you notice my absence for last few months? Well! If you enjoyed my absence, I am sorry, I am back! 😊
 Viral fever and other maladies seem to have kept everyone busy. Diwali has come and gone. Unexpectedly cold days are here, which most of us must be enjoying (save, may be the running noses



of children!). Like every issue, the articles in this issue are also inspired by issues in day to day practice of medicine. **This time let us discuss** - A) Rapid Dengue tests B) Activation of Coagulation and Fibrinolysis During Dengue Virus Infection C) Comparative study of sensitivity of diagnostic tests for tuberculosis in children D) Pathology of Genital Tract in Postmenopausal bleeding.

The Comparative Accuracy of 8 Commercial Rapid Immunochromatographic Assays for the Diagnosis of Acute Dengue Virus Infection

Dengue is suspected by a triad of typical clinical syndrome, falling platelets and rising hematocrit, but sometimes relatives of patient want some direct evidence that we are dealing with dengue and nothing else. In such instances , rapid immunochromatographic tests are employed to detect antibodies against dengue virus.



I am afraid the **answer is not very positive**. This study from “**Clinical Infectious Diseases**” says that “Users of RDTs for dengue should be aware that many of these tests have a diagnostic accuracy that falls well below the manufacturers’ claims. If an acute specimen yields a negative result, a convalescent serum sample should be tested to confirm the result.” (Page 2)

But are these tests good enough?

Activation of Coagulation and Fibrinolysis During Dengue Virus Infection

Isolated prolongation of aPTT in patients suspected of dengue prompted literature search in this area, that search was rewarded with this paper. **This article says “that there is now only supportive care available for DHF/DSS patients. To improve therapy and supportive care, a better understanding of the pathogenesis of bleeding and early diagnostic**



markers of the disease are very important. In this study, APTT prolongation and tPA/PAI-1 ratio increase in the acute stage of dengue virus infection showed good association with disease severity, they can serve as early indicators. In addition, therapeutic intervention to prevent plasmin activation in the acute stage may be beneficial to DHF/DSS.” (Page 3)

Comparative study of sensitivity of diagnostic tests for tuberculosis in children

Time and again all of us have experienced the frustration of not getting the evidence to support our diagnosis of tuberculosis, and this is especially true in pediatric cases. This paper from CMPH Medical



College, Vile Parle; seems quite enthusiastic about **gastric lavage test, they say it can be considered as one of the diagnostic test for the suspected or problematic cases of childhood tuberculosis.** (4)

Pathology of Genital Tract in Postmenopausal Bleeding

Endometrial biopsies for post-menopausal bleeding form fair part of everybody’s workload. To compare our experience with those of others, I looked up & found this paper from **Bombay Hospital Journal. In this paper, group from Nair Hospital is discussing their experience, it is like this - among the benign causes, atrophic endometrium, endometrial**



hyperplasia, proliferative endometrium, endometrial polyp, endocervical polyp, cervicitis, cervical ulcer and vaginal ulcer are common. In malignant causes, cervical carcinoma was most common, followed by endometrial carcinoma. (Page 5)

After doing this newsletter for couple of years, I have realized how difficult it is to meet writing deadlines, and my respect for journalists who do so has increased manifold. So I think, it is best that this venture be called “A Blog in Print Medium”

Anyway, you can find the sections Interesting cases, Humor, Web resources and Parting thought on the usual pages. I hope you enjoy this issue. **Take care! Thanks and regards,**



Sachin

Closer look at health

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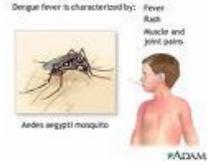


If you think this is interesting (or boring!), and would (still) like to check back issues, they are here- <http://sachinkale1.tripod.com>

Leave your comments & check others at – <http://sachinkale1.tripod.com/comments.htm> (1, Cont.)

Clinical Infectious Diseases 2006; 42:1127–34

The Comparative Accuracy of 8 Commercial Rapid Immunochromatographic Assays for the Diagnosis of Acute Dengue Virus Infection



- ψ **Background.** The serological diagnosis of acute dengue virus infection relies on the detection of dengue-specific immunoglobulin M (IgM) antibodies. Immunochromatographic tests are rapid diagnostic tests (RDTs) that can be performed at the bedside, but they have not been fully validated for diagnosis of dengue infection.
- ψ **Methods.** More than 20 RDTs for diagnosis of acute dengue infection are commercially available. Of these, 8 were selected for evaluation of performance by use of characterized dengue and nondengue serum specimens, and results were compared with those of a previously published dengue IgM/IgG enzyme-linked immunosorbent assay in conjunction with dengue virus serotyping by reverse-transcriptase polymerase chain reaction.
- ψ **Results.** Assay sensitivities were low, ranging from 6.4% (95% confidence interval [CI], 4.0%–9.7%) to 65.3% (95% CI, 59.9%–70.5%), and specificities ranged from 69.1% (95% CI, 61.4%–76.0%) to 100% (95% CI, 97.8%–100%). Of the 8 tests, only 2 had sensitivities of 100%, the level considered to be clinically useful, and, of these, 1 had relatively low specificity (69.1%). Samples collected early in the infection were less likely to test positive than those collected later. A thermal stability study demonstrated a loss in performance of some RDTs when they were stored at a high ambient temperature for 3 months.
- ψ **Conclusions.** Users of RDTs for dengue should be aware that many of these tests have a diagnostic accuracy that falls well below the manufacturers' claims. If an acute specimen yields a negative result, a convalescent serum sample should be tested to confirm the result. No RDT adequately differentiated primary and secondary dengue infections, and the tests should not be used for this purpose.

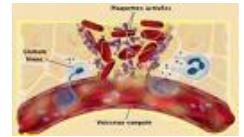
Interesting Cases

- ❖ Undifferentiated Uterine sarcoma - <http://telemmed.ipath.ch/ipath/object/view/149964>
- ❖ Well Differentiated Neuroendocrine neoplasm of pancreas (With Immunohistochemical confirmation) - <http://telemmed.ipath.ch/ipath/object/view/149334>
- ❖ Textbook example of Basal Cell Carcinoma of nose - <https://telemmed.ipath.ch/ipath/object/view/148579>
- ❖ Secondaries from adenocarcinoma on chest, primary – unknown - <http://telemmed.ipath.ch/ipath/object/view/146797>
- ❖ Pathological fracture of neck of femur, femoral head showing adenocarcinoma deposits (from same case as above) - <http://telemmed.ipath.ch/ipath/object/view/146797>
- ❖ Perianal wart– Benign Keratosis consistent with Epidermal Nevus - <https://telemmed.ipath.ch/ipath/object/view/147857>
- ❖ Metastatic neuroblastoma in axilla (With immunohistochemical work up) - <https://telemmed.ipath.ch/ipath/object/view/147533>
- ❖ Blood film: Sickle crisis - <http://www.flickr.com/photos/sachinkale/1753063120/>
- ❖ Staph aureus from a case of endophthalmitis - <http://www.flickr.com/photos/sachinkale/2054663998/>

(2, Cont.)

J. Med. Virol. 63:247±251,

Activation of Coagulation and Fibrinolysis During Dengue Virus Infection



- ψ Dengue virus infection can induce mild dengue fever (DF) or severe dengue hemorrhagic fever and dengue shock syndrome (DHF/DSS) in human.
- ψ The pathogenesis of hemorrhage in dengue virus infection is not fully understood.
- ψ Since hemostasis depends on the balance between coagulation and fibrinolysis, alternation of some coagulation parameters (platelet count and activated partial thromboplastin time, APTT) as well as fibrinolytic parameters (tissue plasminogen activator, tPA and plasminogen activator inhibitor- 1, PAI-1) were compared in 8 DHF/DSS and 17 DF patients.
- ψ Patients showed thrombocytopenia, APTT prolongation, and tPA increase in the acute stage of disease, indicating activation of coagulation and Fibrinolysis.
- ψ The activation of coagulation and fibrinolysis in DHF/DSS patients was much more severe than DF patients.
- ψ In the convalescent stage, a rise of PAI-1 level and platelet count with concomitant decline of tPA level and APTT returned to normal in both DHF/DSS and DF patients.
- ψ Therefore, the activation of coagulation and fibrinolysis during the acute stage of dengue virus infection is offset by the increase of platelet and PAI-1 during convalescent stage.
- ψ Taken together, these results suggest that the degree of coagulation and fibrinolysis activation induced by dengue virus infection is associated with the disease severity.

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Sunday times on my laptop! Do not worry about the font size; you click on an item, and it enlarges!

(3, Cont.)

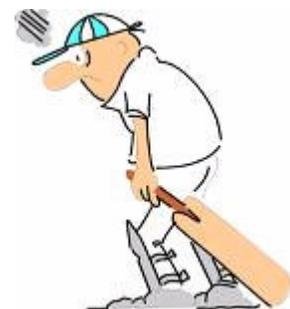
Comparative Study Of Sensitivity Of Diagnostic Tests For Tuberculosis In Children



- ⌘ Childhood tuberculosis is believed to be on the rise worldwide, because of persisting inability to confirm the diagnosis.
- ⌘ A study was therefore taken up based on criteria with acceptable sensitivity, specificity and positive value.
- ⌘ Total 75 children of diagnosed cases of tuberculosis were registered from various TB clinics and Shri Mumbadevi Hom. Hospital.
- ⌘ Three groups of patients namely A (1-5 years), B (5-10 years), C (10-14 years) were formed and diagnosis was based on the following parameters : X-ray chest, MT, ESR/Haematology, CRP, Gastric lavage, Adenine deaminase, TB IgG.
- ⌘ The results were tabulated in to various graphs as mentioned in the test.
- ⌘ The sensitivity of various test against the gastric lavage was done.
- ⌘ The statistical significance of gastric lavage AFB positive is 70.3% of patients and its 'P' value is significant over ESR test, TB IgG test, ADA test.
- ⌘ Therefore gastric lavage test can be considered as one of the diagnostic test for the suspected or problematic cases of childhood tuberculosis.

PJs: Cricket jokes

- ☺ The captain of a team says to the Umpire, "My players want to know if there is a penalty for thinking." The Umpire says, "No." The captain says, "Well we think you're stupid, then."
- ☺ Jones had taken his wife to a cricket match. She sat through the first innings although plainly bored. In the second innings a batsman gave a tremendous swipe and knocked the ball out of the ground. 'Thank goodness they got rid of it,' she sighed. 'Now we can all go home.'
- ☺ The two rival cricketers were talking. "The local team
wants me to play for them very badly.'
'Well, you're just the man for the job.'



(4, Cont.)

Pathology of Genital Tract in Postmenopausal Bleeding



- ψ Postmenopausal bleeding (PMB) is an important indicator that heralds the presence of malignancy.
- ψ Endometrial biopsies/curettage, cervical biopsies and hysterectomy specimens were examined and histopathologically studied in women presenting with postmenopausal bleeding.
- ψ This was a retrospective and prospective study of over 44 months.
- ψ The purpose of the study was to ascertain aetiology and study incidence of malignancy in relation to age and clear span i.e. period between cessation of menses and onset of bleeding per vagina.
The malignant causes were more frequent than benign causes.
- ψ Among the benign, the findings were atrophic endometrium (16.3%), endometrial hyperplasia (13.4%), proliferative endometrium (8.6%), endometrial polyp (2.8%), endocervical polyp (2.8%), cervicitis (0.96%), cervical ulcer (0.96%) and vaginal ulcer (0.96%).
- ψ In the group of malignant causes, cervical carcinoma was most common (39.4%), followed by endometrial carcinoma (9.6%).
- ψ The percentage of women with malignant lesions is two to three times greater than reported in western literature.
- ψ The delay between the onset of bleeding and presentation is worrisome and suggests the need for public education.
- ψ A clear link emerged between increased age and incidence of malignancy.
- ψ The paper shows the importance that any type of postmenopausal bleeding however slight should be thoroughly investigated.

Parting Thought...



"Man often becomes what he believes himself to be. If I keep on saying to myself that I cannot do a certain thing, it is possible that I may end by really becoming incapable of doing it. On the contrary, if I have the belief that I can do it, I shall surely acquire the capacity to do it even if I may not have it at the beginning."

- Mohandas Karamchand (Mahatma) Gandhi

(End, 5)