**Hello!**

**Season's Greetings to you and your family.** It is Makar Sankranti and if you are a **kite aficionado** check out some related photos on my **blog** at – http://sachinkale.blogspot.com. And thanks for encouraging comments about last issue!

**This time eye-catching news is -** A) Association between Koch's and smoking B) *Pneumocystis* Infection in Infants C) Value cytology in transudates D) In search of definition of error in surgical pathology. So, come let us discuss these issues…

**Beware of tobacco smoke… it is associated with TB also…**

I had faint idea regarding the association between tobacco smoke and TB, but I was not aware that there is a growing body of evidence supporting this association. This article from PLOS Medicine

examines the available literature and concludes that **there is sufficiently strong evidence** between smoking and risk for Koch's.
**One more reason to encourage smoke free world...**
***(Page 2)***

**Primary *Pneumocystis* Infection in Infants Hospitalized with Acute Respiratory Tract Infection**

This is new to me…immunocmpetent infants can get infected with this bug is something I had not thought of, but here is an article telling just this story only… If I remember III MBBS medicine well, the good

old **Trimeth-Sulfa works in such cases and old drug does deserve to take a bow for being there & helping us! What do you think?** Check out details on page 3.

**A case for not wasting your time looking for malignant cells in transudative effusion…**

**The request** to look for malignant cells in an obvious transudate is made number of times, it is my experience that one never finds anything worrisome in such transudates, it is just one of those causes like cirrhosis, nephritic syndrome or CCF usually. But in this age of evidence based medicine, I needed some proof that it is really so.

So I looked up and found this study; the study concludes that - ***Cytologic evaluation for malignant cells of a transudative pleural effusion is not recommended.*** **Bottom line seems to be,** we need not worry our heads off that it could be malignant effusion if it unequivocally fulfills the criteria for a transudate. Check out the details on ***page 4.***

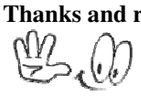
**Error in surgical pathology, as in other medical disciplines, is much feared but poorly understood…**

The clinically significant diagnostic (cognitive) error rate in surgical pathology reported in the literature varies from 0.26%1 to 1.2%. Which seems very low considering the fact that pathologists apply a **confusing array of diagnostic criteria**, both evidence-based and empirical, to a relatively small number of difficult cases randomly mixed with a large number of ''routine'' cases—and **often with incomplete or misleading clinical information.**
***(Not my words! The article says so!)***

Our judicial system **defines error** as patient injury resulting from medical negligence. **Negligence** is defined by expert testimony as medical practice that falls below the standard of care. **Standard of care** is the professional behavior expected of a prudent, careful, and informed physician; it is a national standard not a community standard and is difficult to differentiate from ''best practice.'' This article discusses problem areas in anatomic pathology.***(P. 5)***

**Saw 'Bhagam Bhag' few days back**, *you will say, what's up mate, having a swell time, eh? NO… do you think there is any choice left when your better half, just wants to see it?! Check out my take on the movie on page 3.*

**Links to this month's interesting cases are featured on page 2.**
**Don't forget** to check all pages and find trivia, jokes, tips & the usual 'Parting thought' section.
**Thanks and regards,**



***____Sachin***

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**Issues since Jan, 2005 available online – http://sachinkale1.tripod.com**

Leave your **comments** or check others at – **http://sachinkale1.tripod.com/comments.htm**

***(1, Cont. )***

Closer look at health – through the Internet

*PLoS Med 4(1): e20*

**Tobacco Smoke, Indoor Air Pollution and Tuberculosis: A Systematic Review and Meta-Analysis**

- **Tobacco smoking, passive smoking, and indoor air pollution** from biomass fuels have been implicated as **risk factors for tuberculosis (TB)** infection, disease, and death.
- Tobacco smoking and indoor air pollution are persistent or growing exposures in regions where TB poses a major health risk.
- The authors undertook a systematic review and meta-analysis to quantitatively assess the association between these exposures and the risk of infection, disease, and death from TB.

**Methods and Findings**

- Authors conducted a systematic review and meta-analysis of observational studies reporting **effect estimates and 95% confidence intervals on how *tobacco smoking, passive smoke exposure, and indoor air pollution are associated with TB***.
- They identified 33 papers on tobacco smoking and TB, five papers on passive smoking and TB, and five on indoor air pollution and TB.
- They found **substantial evidence that tobacco smoking is positively associated with TB**, regardless of the specific TB outcomes.
- Compared with people who do not smoke, smokers have an ***increased risk*** **of having a positive tuberculin skin test, of having active TB, and of dying from TB**.
- Although we also found evidence that **passive smoking and indoor air pollution increased the risk of TB disease**, these associations are ***less strongly supported*** by the available evidence.

**Conclusions**

- There is consistent **evidence that tobacco smoking is associated with an increased risk of TB**.
- The finding that passive smoking and biomass fuel combustion also increase TB risk should be substantiated with larger studies in future.
- TB control programs might benefit from a focus on interventions aimed at reducing tobacco and indoor air pollution exposures, especially among those at high risk for exposure to TB.

## Interesting Cases

***Not much exciting stuff this month; to mention a few that had me not exactly in cold sweat but thinking hard, were these few cases…***

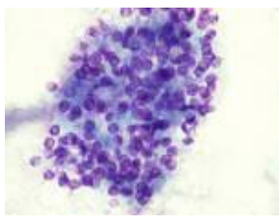
1. Lost some sleep over an enigmatic granulomatous lesion of epiglottis, ZN stain was negative; the old man is not responding to empiric anti-Koch's, no evidence of fungus.. If interested check our laryngoscopic and histopathlogic images and ensuing discussion at –
   http://telepath.patho.unibas.ch/ipath/object/view/111333
   The case is still very much open.
2. I am not sure, whether this will prove interesting to clinician, but this case of hydropic abortus vs. early changes of vesicular mole, might prove interesting to pathologists. In doubtful cases, instead of splitting our hair over soft morphologic clues it would be rational to just check up β-HCG after some time to make sure it goes down to basal level. Of course it is my opinion, yours may vary -
   http://telepath.patho.unibas.ch/ipath/object/view/109899
3. And yeah, you may want to check out how choroidal hemorrhage looks like, in an enucleated eyeball – http://www.flickr.com/photos/sachinkale/364714938/

***(2, Cont. )***

*Emerging Infectious Diseases Volume 13, Number 1–January 2007*

## Primary *Pneumocystis* Infection in Infants Hospitalized with Acute Respiratory Tract Infection

- Acquisition of *Pneumocystis jirovecii* infection early in life has been confirmed by serologic studies.
- However, **no** evidence of **clinical illness** correlated with the **primary infection** has been found in **immunocompetent children**.
- Authors analyzed 458 **nasopharyngeal aspirates** from 422 patients hospitalized with 431 episodes of acute respiratory tract infection **(RTI)** by using a **real-time PCR assay**.
- In 68 episodes in 67 infants, *P. jirovecii* was identified.
- The odds ratio (95% confidence interval) of a positive signal compared with the first quartile of age (7–49 days) was 47.4 (11.0–203), 8.7 (1.9–39.7), and 0.6 (0.1–6.7) for infants in the second (50–112 days), thid (113–265 days), and fourth (268–4,430 days) age quartiles, respectively.
- Infants with an episode of upper RTI (URTI) were 2.0 (1.05–3.82) times more likely to harbor *P. jirovecii* than infants with a lower RTI.
- *P. jirovecii* may manifest itself as a self-limiting URTI in infants, predominantly those 1.5–4 months of age.



## Bollywood under Microscope: Bhagam bhag

I am not avid movie goer or a movie buff; & playing a film critic is not my cup of tea. And if you think I really make a mess of it, please excuse me & skip directly on to next section. Well, yours truly went to see 'Bhagam Bhag' few days back (How & why of which is already told on page 1 !),

Well, if you have seen Priydarashan, Paresh Rawal & Akshay Kumar's previous offerings like Hera Pheri, you know what to expect; add Govinda to this recipe, and you get all the masala you need for a good comedy. Be weary though, there is more to this movie than just good old comedy, Priydarshan's penchant for weaving multiple separate stories in one show, adding some mystery & taking them to crescendo simultaneously, is seen in this movie also.

My view is that comedy was good (but not great), the murder mystery just goes on & on & on with new twists & complication added at every corner, without giving a moment of respite (bit tiresome); musical score creates good mysterious environment, Tanushri Datta is there for just one (item) song 'Pyar Ka Signal', but does not disappoint her fans, those who don't know why she has fan following will do well to watch that song! All in all, not a bad way to spend 3 hrs and some hard earned money! (Oh! The popcorn at multiplexes!).

***(3, Cont.)***

*CHEST 1998; 113:1302-04*

## Cytologically Proved Malignant Pleural Effusions: Distribution of Transudates and Exudates

- This study attempts to **determine the distribution of transudates vs exudates** in pathologically proved malignant pleural effusions and the necessity for cytologic studies in patients with a transudative effusion.
- *Authors did a* **retrospective review** of all cytologically positive malignant pleural effusions at Duke University Medical Center over an 18-month period.
- All effusions were characterized as a transudate or an exudate based on **standard criteria**, including lactate dehydrogenase and protein values.
- Ninety-eight patients with a mean age of 62 years were identified as having a cytologically positive malignant pleural effusion and blood chemistry values available to distinguish an exudate from transudate.
- Ninety-seven patients (**99%,** 95% confidence interval; 0.94 to 0.99) had criteria for an exudative effusion. One patient (1%) with diffuse metastatic lung cancer had a borderline transudate and was in congestive heart failure at the time of thoracentesis.
- Authors *Conclude that* **cytologically positive pleural effusions for malignancy are almost always exudates**.
- **Cytologic evaluation for malignant cells of a transudative pleural effusion is *not recommended.***

**More PJs: Rules for Bollywood**

- ☺ A man will show no pain while taking the most ferocious beating but will wince when a woman tries to cleanse his wounds.
- ☺ If a large pane of glass is visible, someone will be thrown through it before long.
- ☺ Nothing is too tight for Madhuri.
- ☺ The hero cannot fall in love with the heroine (vice versa) unless they first perform a dance number in the rain.
- ☺ Once applied, make-up is permanent, in rain or in any other situation.
- ☺ It does not matter if you are heavily outnumbered in a fight involving martial arts - your enemies will wait patiently to attack you one by one by dancing around in a threatening manner until you have knocked out their predecessors.
- ☺ A large group of goondas can be shooting at the hero, but he will never be hit, unless of course he is attempting to save the chick.

***(4, Cont. )***

*Arch Pathol Lab Med. 2006;130:617–619*

**Medicolegal Aspects of Error in Pathology**

David B. Troxel, MD

- The Objective of this study was to discuss **the various ways error is defined in surgical pathology.** To identify errors in pathology practice identified by an analysis of pathology malpractice claims.
- Three hundred seventy-eight pathology **malpractice claims were reviewed**. Nuisance claims and autopsy claims were excluded; 335 pathology claims remained and were analyzed to identify repetitive patterns of specimen type and diagnostic category.
- All pathology malpractice claims reported to The Doctors Company of Napa, Calif, between 1998 and 2003.
- Fifty-seven percent of malpractice claims **involved just 5 categories of specimen type and/or diagnostic error**, namely, breast specimens, melanoma, cervical Papanicolaou tests, gynecologic specimens, and system (operational) errors.
- Sixty-three percent of claims involved **failure to diagnose cancer**, resulting in delay in diagnosis or inappropriate treatment.
- A **false-negative diagnosis** of melanoma was the single most common reason for filing a malpractice claim against a pathologist. Nearly one third involved melanoma misdiagnosed as Spitz nevus, 'dysplastic'' nevus, spindle cell squamous carcinoma, atypical fibroxanthoma, and dermatofibroma.
- While **breast biopsy claims** were a close second to melanoma, when combined with breast fine-needle aspiration and breast frozen section claims, breast specimens were the most common cause of pathology malpractice claims.
- Cervical **Papanicolaou** test claims were third in frequency behind melanoma and breast; 98% involved false-negative Papanicolaou tests.
- Forty-two percent of gynecologic surgical pathology claims involved **misdiagnosed ovarian tumors**, and 85% of these were false-negative diagnoses of malignancy.
- The most common cause of system errors was **specimen ''mix-ups''** involving breast or prostate needle biopsies.

Intention of discussing this article was to draw attention towards this - 'Ideally, a correct result would be an accurate result. Accuracy reflects the truth, based on scientifically validated gold standards. Unfortunately, few scientifically validated gold standards exist in anatomic pathology. Morphologic analysis, the cornerstone of anatomic pathology, cannot be considered a gold standard, because it is subjective and based on observer experience. Although some observers have more experience than others or are more competent than others, all observers are human and are subject to the problems of human fallibility that are well known to cognitive psychologists and to those who study error. Immunohistochemistry has similar problems and is subject to other reproducibility pitfalls stemming from the technique.'

**Parting Thought…**

**Knowledge is of two kinds: we know a subject ourselves, or we know where we can find information upon it.**

*~ Samuel Johnson.*
*English poet, essayist, biographer, lexicographer.*
(I liked this quote, especially the second part, '…where to find information'. It is so true in our medical sciences; where it is simply impossible to know the subject completely, and if we know where & how to find right information that is a big plus. ___*sachin*)

***(End, 5)***