

Hello,

Clock inevitably moves forwards, as we catch our breath, trying to catch up with unending things that must be done - sometimes it's like a never ending downward ride of a rollercoaster.



Balancing work, family, and our own health is not a cakewalk. And that's why I am late this month. Ok, preliminaries over; this time let us discuss - A) Terminology in path reports B) MRSA – Indian scene. C) Hepatitis C testing D) Needle stick injuries.

Pathologists are from Mars, clinicians from Venus?!

Hey that's not what I meant...

Communication problems are common health care settings.



Here is one look at language problem - what pathologists actually mean and how it can be misinterpreted. (page 2)

Everyone is talking about MRSA, where are the Indian studies?

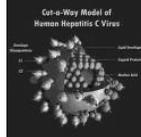
Most of the developed countries take utmost care in detecting and managing Methicillin Resistant Staph. Aureus. One article from recent New England Journal of Medicine discusses the findings of MRSA in patients presenting to emergency department with skin infections. S.



aureus was isolated from 320 of 422 patients with skin and soft-tissue infections (76%). The prevalence of MRSA was 59% overall and ranged from 15 to 74 %. I thought let us check out the **Indian scene**; on literature search at pubmed, I found studies from Mumbai and Maharashtra also; this study from Indian Journal of Medical Microbiology, found MRSA in 37.9 % of isolates. (page 3)

How good are the tests for hepatitis C?

This infection poses major risk, especially to patients undergoing hemodialysis. This study from Indian Journal of Medical Microbiology



tested a new **HCV ELISA** for detecting the core antigen and it found that The **sensitivity and specificity** of the assay were **60% and 83%** respectively (4)

All of us are scared of Needle-stick-injuries, This study from **Indian Journal medical sciences** takes a look at this problem in medical students and found that - NSIs and non-reporting of NSIs were highly prevalent in these students.



And education about the transmission of blood-borne infections, standard precautions and increasing availability of protection strategies must be provided. I specially liked this month's parting thught, don't forget to check it out on **Page 5**.

By now you must have guessed that I have an incorrigible **itch** for medical journalism. I think I should say **thanks**

for tolerating my writing adventures!
Regards,


~Sachin

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(1, Cont.)

Closer look at health – through the Internet

Phraseology in pathology reports. A comparative study of interpretation among pathologists and surgeons



- ✓ **Surgical reports** should provide clinicians with **diagnostically accurate and medically useful information** with which to effect the best management of patients.
- ✓ In practice, **pathologists use a variety of descriptive phrases** to convey to the clinician their **level of certainty** in making a particular diagnosis.
- ✓ Assess the **problems of histopathologists** attempting to convey their uncertainty in pathological diagnosis to their clinical colleagues through the written word in reports.
- ✓ The variable interpretation of the six definitive phrases used by pathologists infers an **inherent misunderstanding and consequent misapplication** of these terms in surgical reports.
- ✓ It is also apparent that **surgeons prefer definitive terms** relating to unequivocal diagnoses with which to plan patient management, whereas **pathologists prefer to issue reports using less definitive phrases**.
- ✓ Pathologists may have to make a **qualified diagnosis** for a number of reasons such as **size and preservation of biopsy tissue, non-specificity or atypicality** of histological appearances and incomplete clinical information.
- ✓ As for any investigation, the **results must be interpreted in the context of the whole clinical picture**.
- ✓ Most routine pathological interpretation takes place in the context of **incomplete clinical information** and this leads to **diagnostic uncertainty**.
- ✓ If the histology is reported in the **light of other findings** (clinical examination, blood tests or imaging) or after discussion with the referring clinician, the **diagnostic confidence** of the pathologist is likely to be **higher**.
- ✓ In cytological **practice** the ambiguities of language have been minimized by the adoption of a numerical reporting system which encompasses levels of diagnostic uncertainty.
- ✓ In the National Breast Screening Programme,⁴ the Royal College of Pathologists Working Committee recommended the following classification: C 1/inadequate; C2/benign; C3/suspicious, probably benign; C4/suspicious, probably malignant; and C5/malignant.
- ✓ **BOTTOM LINE seems to be "Phrases should be mutually understood and acceptable for use by both pathologists and clinicians"**.

Table 2 Pathologists' use of phrases and surgeons' preference for phrases

	Pathologists' use			Surgeons' preferences	
	Common	Uncommon	Never	Like	Dislike/confusing
Diagnostic of	10 (50%)	8 (40%)	2 (10%)	20 (100%)	0
That of	19 (95%)	1 (5%)	0	11 (55%)	9 (45%)
Show	7 (35%)	8 (40%)	5 (25%)	15 (75%)	5 (25%)
Characteristic of	5 (25%)	10 (50%)	5 (25%)	15 (75%)	5 (25%)
Indicative of	4 (20%)	7 (35%)	9 (45%)	14 (70%)	6 (30%)
Represent	4 (20%)	10 (50%)	6 (30%)	13 (65%)	7 (35%)
In keeping with	17 (85%)	3 (15%)	0	7 (35%)	13 (65%)
Consistent with	18 (90%)	2 (10%)	0	14 (70%)	6 (30%)
Highly suggestive of	10 (50%)	9 (45%)	1 (5%)	11 (55%)	9 (45%)
Favour	5 (25%)	12 (60%)	2 (10%)	4 (20%)	16 (80%)
Suggestive of	15 (75%)	5 (25%)	0	5 (25%)	15 (75%)
Suspicious of	6 (30%)	13 (65%)	1 (5%)	6 (30%)	14 (70%)
Reminiscent of	0	8 (40%)	12 (60%)	1 (5%)	19 (95%)

(2, Cont.)



- ✓ **Prevalence and antibiotic susceptibility pattern of MRSA in major southern districts of Tamilnadu is reported in this study.**
- ✓ These authors collected a total of **7172 clinical specimens and 1725 carrier screening samples** from different centers and subjected to **MRSA screening** using conventional microbiological methods.
- ✓ **Subsequently the antibiotic sensitivity test** was performed for confirmed MRSA isolates.
- ✓ **They found that out of 906 strains of S. aureus isolated from clinical and carrier samples, 250 (31.1%) and 39 (37.9%) were found to be methicillin resistant respectively.**
- ✓ Almost all clinical MRSA strains (99.6%) were **resistant to penicillin, 93.6% to ampicillin, and 63.2% towards gentamicin, co-trimoxazole, cephalexin, erythromycin, and cephotaxime.**
- ✓ All MRSA strains (100%) of carrier screening **samples had resistance to penicillin and about 71.8% and 35.9% were resistant to ampicillin and co-trimoxazole respectively.**
- ✓ **Multidrug resistance was observed among 63.6% of clinical and 23% of carrier MRSA isolates.**
- ✓ However, all strains of clinical and carrier subjects **were sensitive to vancomycin.**

The determination of prevalence and antibiotic sensitivity pattern of MRSA will help the treating clinicians for first line treatment in referral hospitals.

Number and percentage distribution of MRSA from different clinical and carrier screening samples

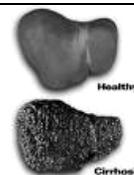
Clinical specimens	Total specimens (n=7172)	<i>S aureus</i> (n=803)	%	MRSA (n=250)	%
Sputum/throat swab	871	56	6.4	20	35.7
Pus	1847	575	31.1	193	33.6
Tissue exudates	63	7	11.1	2	28.6
Blood	760	74	9.7	21	28.4
Bed sore	77	4	5.2	1	25.0
Pleural/Synovial	396	13	3.3	3	23.1
Catheter tip	236	20	8.5	3	15.0
Urine	2621	43	1.6	6	14.0
Semen	301	11	3.7	1	9.1
Carrier screening samples	Total specimens (n=1725)	<i>S aureus</i> (n=103)	%	MRSA (n=39)	%
Nasal	650	52	8.0	27	51.9
Conjunctival	600	20	3.3	8	40.0
Oral	50	3	6.0	1	33.3
Ear	350	14	4.0	2	14.3
Tracheal	75	14	18.7	1	7.1

Prevalence rate of S. aureus and MRSA in clinical specimens and carrier screening samples

Sample category	<i>S. aureus</i>		MRSA	
	Prevalence	95% CI	Prevalence	95% CI
Clinical specimens	11.2%	10.5, 11.6	31.1%	27.9, 34.5
Carrier samples	6.0%	5.0, 7.3	39.0%	29.7, 49.1

(3, Cont.)

UTILITY OF HCV CORE ANTIGEN ELISA IN THE SCREENING FOR HEPATITIS C VIRUS INFECTION IN PATIENTS ON HEMODIALYSIS



- ✓ An **enzyme immuno assay** for hepatitis C core antigen was recently developed and **its performance was compared** with that of the hepatitis C virus (**HCV**) **RNA** in the screening of HCV infection in patients on hemodialysis.
- ✓ One hundred and eleven chronic renal failure patients undergoing haemodialysis between May 2003 and October 2004 were included in the study.
- ✓ All the patients were **tested for anti HCV antibody, core antigen and RNA**.
- ✓ Fifteen patients were **anti HCV antibody positive**, three patients were positive for **HCV core antigen and RNA**, three patients were positive for **HCV RNA**, while two patients were **positive only for core antigen but negative for RNA**.
- ✓ In **anti HCV antibody positive** patients, the **core antigen was negative** while the **viral RNA continued to be present**.
- ✓ Hence, relying solely on a **single HCV core antigen** assay may not be useful for a definite diagnosis of early HCV infection.
- ✓ The **sensitivity and specificity** of the assay were **60% and 83%** respectively, while the **positive predictive value** was **14.3%**, **negative predictive value** was **97.7%** and the efficiency was 81.9%.

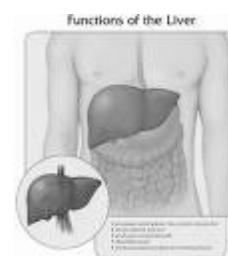
Consolidated results of RT - PCR, core antigen ELISA and anti HCV ELISA for detection of HCV infection among dialysis patients (n = 111)

Category	Number	%
Ab+RNA+/Ag-	15	13.5
Ag+RNA+/Ab-	3	2.7
Ag+/Ab-RNA-	2	1.8
RNA+/Ab-Ag-	3	2.7

Ab: Antibody, Ag: Antigen

	Core Antigen	
	positive	negative
PCR positive	3	18
PCR negative	2	88

Sensitivity-60%, Specificity -83%, Positive Predictive Value - 14.3%, Efficiency -81.9%.





- ✓ All of us including medical, dental, nursing and midwifery students are **at high risk** for **occupational exposure** to blood-borne pathogens (BBPs) via sharp injuries such as needle stick injuries (NSIs).
- ✓ The aim of this study was to **determine the frequency** of NSIs and the knowledge, attitude and practices of these students regarding their prevention.
- ✓ The **clinical students** at Shiraz University of Medical Sciences, Iran, were eligible to participate in a survey conducted by a self-administered questionnaire in 2004, asking them about NSIs during their clinical training undergraduate years.
- ✓ A cross-sectional study evaluated NSIs and practices regarding protective strategies against BBPs in medical, dental, nursing and midwifery students at Shiraz University, Iran, in 2004.
- ✓ The data were entered into a personal computer using Epi-Info (version 2000). Chi-square and Fisher's exact tests for categorical variables and student t-test for continuous variables were performed, where appropriate, using SPSS version 10. Alpha was set at the 5% level.
- ✓ The questionnaire was completed by 688 (53%) students. **71.1% (489/688) of the students had NSIs** that most commonly (43.6%) occurred in **patient rooms**. **82% (401/489) of NSIs were not reported**. 87.8% (604/688) of the students received information about standard isolation precautions and 86.2% of them had been vaccinated against hepatitis B.
- ✓ NSIs and non-reporting of NSIs were highly prevalent in these students.
- ✓ **Education about the transmission of blood-borne infections, standard precautions and increasing availability of protection strategies must be provided.**

Locations where injuries occurred -

Location	Students	
	N	%
Patient room	583	43.6
Emergency room	302	22.6
Surgery ward	194	14.5
Theatre	168	12.6
Unstated	89	6.7

How injuries occurred -

Procedures	Students	
	N	%
Venous sampling or IV injection	382	28.6
Wound suturing	363	27.2
Arterial puncture	160	12
Recapping needles	144	10.8
Local anesthetic injection for dental procedures	80	6
Unstated	207	15.4

Reasons they were not reported -

Reasons	Students	
	N	%
Did not know that all injuries had to be reported	382	28.6
Did not know to whom injuries should be reported	363	27.2
Believed reporting would not influence the outcome	160	12
Other	144	10.8

Reasons for not routinely wearing double gloves -

Reasons	Students	
	N	%
Inadequate facilities	360	52.3
Inability to manipulate tissues	297	43.2
Decreased hand sensation, tingling, numbness	41	5.9
Belief that double gloving did not increase protection	125	18.2

Parting Thought...



"Success in life consists of going from one mistake to the next without losing enthusiasm."

~ *Winston Churchill*

(End, 5)