

**Hi!**

Monsoon rains are here, bringing out the pent up heat, & humidity, but evenings have become much more pleasant. The inevitable cycle of nature (call it God's play, if you will). Wish we did not have to discuss medicine but alas! There were few troublesome cases which prompted me to discuss some topics; *this time let us discuss*



A) Disorders of sodium balance B) Clinical Utility of the Erythrocyte Sedimentation Rate C) The role of histopathological examination of products of conception in routine clinical practice D) Research in pathology: judgment, or evidence-based medicine?

**Disorders of sodium balance**

IT WAS A CASE of intractable hyponatremia that nudged me to look this up. There is a pretty useful clinical review in BMJ, & it is loaded with useful tables and flowcharts. It says that distinguishing the cause(s) of hyponatraemia may be challenging in clinical practice; and controversies surrounding its management remain.



This area needs clinical trials, notably of existing approaches (water restriction, demeclocycline, rates of dehydration and rehydration), to complement industrially funded randomized controlled trials of novel aquaretics. Find some flow charges and commentary on page 2

**Clinical Utility of the Erythrocyte Sedimentation Rate**

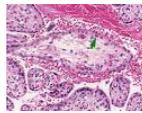
Some things we do as a tradition & some because they are having sound scientific basis. ESR is one such test; **is it science based or tradition based?** When I was wondering about this, I came across this article from American Family Physician. It says that The use of the ESR as a **screening test** in asymptomatic persons is **limited by its low**



**sensitivity and specificity.** When there is a moderate suspicion of disease, the ESR may have some value as a "**sickness index.**" An **extremely elevated ESR** will usually have an apparent cause--most commonly infection, malignancy or temporal arteritis. Details on *page 3.*

**The role of histopathological examination of products of conception in routine clinical practice**

Products of conception is a routine specimen in any histopathology laboratory. A wish to know more about this area led me to this article. In this study a review of the literature was performed to identify studies reporting on findings of histological examination of routinely obtained **products of**



**conception** in the setting of recurrent spontaneous **abortion.** This led to the conclusion that Routine histological examination of **products of conception** in the setting of recurrent spontaneous **abortion** can provide important clinical information in a **minority** of cases. Check out the details on *page 4.*

**Original research in pathology: judgment, or evidence-based medicine?**

I stumbled on to this paper while looking for something else. There is interesting commentary here, about how expertise in anatomic pathology is achieved, how anatomic pathology stands in today's Evidence based medicine. Bottom-line is that, yes, pathology diagnosis is judgment based; and subject



to 'inter observer variation' and potentially to 'error', but the contribution of anatomic pathology to 'EBM' is remarkably strong. To the extent that these judgmental interpretations become data, & tissue interpretations become the arbiters of patient care management decisions. *Details on Page 5*

**Also in this issue ....**

A feature on "Smart Phones in Medicine" & "Web Resources" - page 2, "Web Links To Interesting Cases" - page 3, "Bollywood humour" - page 4 and "Parting Thought" by Abdul Kareem Jabbar on



last page. And before I take your leave let us us pray for good monsoon. *Thanks and regards,*



*Sachin*

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

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

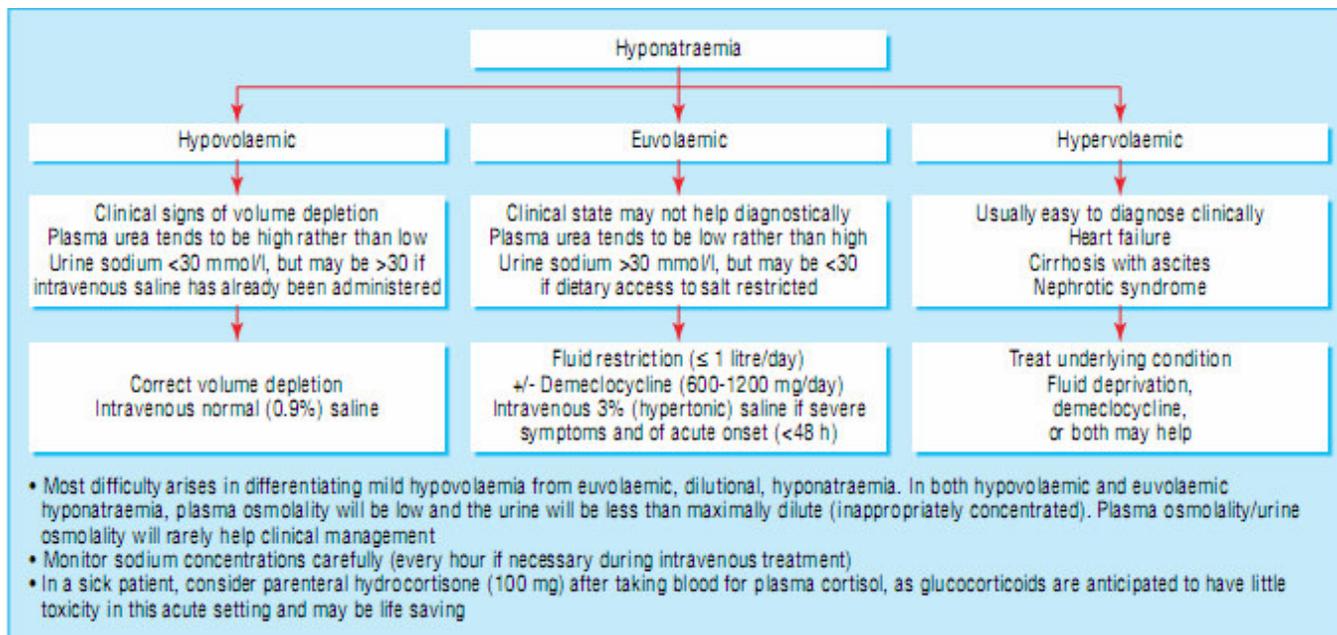
The closer look at health...

*A humble effort towards understanding medical science & becoming a deserving member of robust, science based medical community.*

### Disorders of sodium balance



- ⌘ Sodium disorders are common, particularly in hospital patients and elderly people
- ⌘ Mild sodium disorders may be asymptomatic and self limiting, but severe sodium disorders are associated with considerable morbidity and mortality
- ⌘ The causes of sodium imbalance are often iatrogenic and therefore avoidable
- ⌘ Assessing hydration status and measuring sodium in plasma and urine are key to diagnosing the cause of hyponatraemia
- ⌘ The cause of hypernatraemia will usually be evident from the history Little evidence from randomized controlled trials exists for the treatment of sodium disorders
- ⌘ Slow correction of sodium is usually safe, with careful monitoring of clinical status and plasma sodium



### Smart phones in Medicine

Got a Nokia E50 this week, not a bad deal at 10,500 grand! And that too with 1 GB memory card. Life has changed now ☺ It is real pleasure to read my downloaded PowerPoint, PDF presentations anytime, anywhere. Not only that, also checking the downloaded, hour long pathology webcasts in Real Player, **listening to medical podcasts from journals like Lancet, NEJM.** And all this minus the boring wait for Windoz to start! **There are some related websites that can help us in improving the utility of such phones, some worth mentioning are: <http://www.e-series.org> <http://www.symbian-freak.com> [www.getjar.com](http://www.getjar.com) <http://www.allaboutsymbian.com> I think this platform has tremendous potential. This area is definitely worth exploring. Go ahead check it out!**

### Website Watch: Free Online Dictionary

Do you know how protégé is pronounced correctly? Well I didn't, so what I did is this, went to [www.m-w.com](http://www.m-w.com), and there it was, not only the exact meaning but also the pronunciation. Yes! We can listen to the word being pronounced correctly here. Quite a nifty feature, I think! Pretty useful for kids and in fact for all of us.

(2, Cont. )



*Am Fam Physician 1999;60:1443-50.*

**Clinical Utility of the Erythrocyte Sedimentation Rate**

- ⌘ The erythrocyte sedimentation rate (ESR) determination is a commonly performed laboratory test with a time-honored role.
- ⌘ However, the usefulness of this test has decreased as new methods of evaluating disease have been developed.
- ⌘ The test remains helpful in the specific diagnosis of a few conditions, including temporal arteritis, polymyalgia rheumatica and, possibly, rheumatoid arthritis.
- ⌘ It is useful in monitoring these conditions and may predict relapse in patients with Hodgkin's disease.
- ⌘ Use of the ESR as a screening test to identify patients who have serious disease is not supported by the literature.
- ⌘ Some studies suggest that the test may be useful as a "sickness index" in the elderly or as a screening tool for a few specific infections in certain settings.
- ⌘ An extreme elevation of the ESR is strongly associated with serious underlying disease, most often infection, collagen vascular disease or metastatic malignancy.
- ⌘ When an increased rate is encountered with no obvious clinical explanation, the physician should repeat the test after an appropriate interval rather than pursue an exhaustive search for occult disease.

Comparison of the ESR, C-reactive Protein

Test	Advantages	Disadvantages
ESR	Inexpensive, quick, simple to perform	Affected by a variety of factors, including anemia and red blood cell size; not sensitive enough for screening
C-reactive protein	Most rapid response to inflammation (complementary to ESR in this regard)	Wide reference range may necessitate sequential recording of values, expensive, batch processing may delay individual results

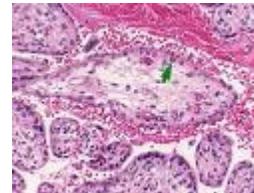
**Web links to Interesting Cases**

*A mix of cases from my lab facility; photographs of which might prove interesting to you -*

1. Beautiful hysterectomy specimen, showing multiple uterine leiomyomas - <http://sachinkale3.tripod.com/fibroid.htm>  
Dr. John Minarcik of Rosalind Franklin University liked this so much that he made a video presentation about it, and he had some flattering words for my photography! (I did not dare show him my other pictures, lest he changes his mind!.) Have a look – <http://youtube.com/watch?v=Xm9ftAeSBIk>
2. Hysterectomy specimen showing huge carcinoma cervix – <http://www.flickr.com/photos/sachinkale/512067801/>  
<http://www.flickr.com/photos/sachinkale/512067235/>
3. Orbital swelling: turned out to be adenoid cystic carcinoma, possibly of lacrimal gland <http://telepath.patho.unibas.ch/ipath/object/view/128079>

(3, Cont.)

**Placental pathology of recurrent spontaneous abortion: the role of histopathological examination of products of conception in routine clinical practice: a mini review**



- ⌘ Histopathological examination of **products of conception** from miscarriages is part of routine clinical practice.
- ⌘ The extent of additional clinically relevant information provided by this investigation in the setting of recurrent spontaneous **abortion** remains uncertain.
- ⌘ Review of the literature was performed to identify studies reporting on findings of histological examination of routinely obtained **products of conception** in the setting of recurrent spontaneous **abortion**.
- ⌘ The initial search identified 312 potential references, but 300 were excluded on further examination due to lack of data on specific histopathological findings in routine **products of conception** specimens from patients with recurrent spontaneous **abortion**.
- ⌘ The 12 included studies indicated that such examination may identify hydatidiform moles, villous dysmorphic features suggesting fetal aneuploidy, chronic histiocytic intervillitis (CHI) and massive perivillous fibrin deposition and impaired trophoblast invasion.
- ⌘ However, in most cases, morphological assessment cannot reliably determine the cause of the miscarriage or distinguish recurrent from sporadic miscarriage.
- ⌘ Studies reporting on the use of additional immunohistochemical methods do not currently provide additional clinically useful diagnostic or prognostic information.
- ⌘ **CONCLUSION:** Routine histological examination of **products of conception** in the setting of recurrent spontaneous **abortion** can provide important clinical information in a minority of cases.

**Bollywood Humor: KBC Auditions**

**Nana Patekar:** Jaldi se jawab bol. Sahi jawab tere ko lakhpati bana dalega. Galat jawab tere ko hijda bana dega.

**Shatrughan Sinha:** Khamosh! Bihari babu ke saamne zaban chalata hai. Tera cheque phaad ke phok doonga.

**Dharmendra:** Galat jawab ! Kutte Kameene, main tera khoon pee jaoonga.

**Amrish Puri:** Sahi jawab ! Mogambo khush hua !

**Amjad Khan:** Kitne options the? Chaar ! Soover ke bachchon ! Chaar chaar options ! Bahut nainsaafi hai ! Dhish-keoin Dhish-keoin ! 50-50 kar ke do galat jawab main uda diye. Ab bol, tera kya hoga kaaliya?

**Sanjay Dutt:** Aye item log, kaye ko udhar khada hai? Idhar aake mere pass baith jaa. Kya be chikne - tere ko aata hai to bol dal varna main tere ko idhar-eech phod dalega.

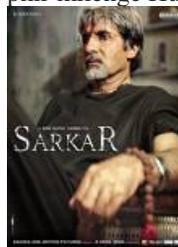
**Raj Kumar:** Jaani, huum, hhuuum hote to apne dost ko phone kar ke sawaal pooch lete.

**Jagdeep:** Bole to Soorma Bhopali - meri jeb ho gayi khaali. Mere pass to koi cheque nahin hain. Arre mujhko jaane do.

**Mithun Chakraborty:** Eeyaeach ! Tu audience poll karega ? Aye, yahan ke public ke paas time nahin hai. Kya nahin hai? Time nahin hai.

**Kesto Mukherji:** Hee-heck. Hee-yaik. Apne ko sab kuch do-do dikh rahela hai. Hee-heck. Yeh aath options kidhar se aa gaye? Hee-yok. Apne ko bahut chad gayeli hai.

**Ashok Kumar:** To abhi aapne yeh dekha ( wheeze ), ki yahan se Delhi ke Ramesh Kumar ( gasp), yahan se Rs 20,000 leke chale gaye. ( groan ). Kal aur dus logon ko leke phir milenge Hum Log (croak ).



(From: www.dinesh.com) (4, Cont.)

**Original research in pathology: judgment, or evidence-based medicine?**



- ⌘ Pathology is both a **medical specialty** and an **investigative scientific discipline**, concerned with understanding the essential nature of human disease.
- ⌘ Ultimately, pathology is **accountable as well**, as measured by the accuracy of our diagnoses and the resultant patient care outcomes. As such, we must **consider the evidence base underlying our practices**. Within the realm of Laboratory Medicine, extensive attention has been given to testing accuracy and precision.
- ⌘ In the case of anatomic pathology and more specifically surgical pathology, **the expertise required to render a diagnosis is derived foremost from experience, both personal and literature-based**.
- ⌘ In the first instance, **knowledge of the linkage** between one's own diagnoses and individual patient **outcomes** is required, to **validate the role of one's own interpretations** in the clinical course of patients.
- ⌘ Experience comes from **seeing this linkage** first hand, from which hopefully comes **wisdom** and, ultimately, **good clinical judgment**.
- ⌘ In the second instance, reading the literature and learning from experts is required. Only a minority of the relevant literature is published in pathology journals to which one may subscribe. A substantial portion of major papers relevant to the practice of anatomic pathology are published in collateral clinical specialty journals devoted to specific disease areas or organs.
- ⌘ Does the practice of anatomic pathology fulfill the tenets of 'evidence-based medicine' (EBM)? If the pinnacle of EBM is 'systematic review of randomized clinical trials, with or without meta-analysis', then anatomic pathology falls far short.
- ⌘ Our published literature is largely observational in nature, with reports of case series (with or without statistical analysis) constituting the majority of our 'evidence base'. Moreover, anatomic pathology is subject to 'interobserver variation', and potentially to 'error'.
- ⌘ Taken further, individual interpretation of tissue samples is not an objective endeavor, and it is not easy to fulfill the role of a 'gold standard'.
- ⌘ Nevertheless, the contribution of anatomic pathology to 'EBM' is remarkably strong.
- ⌘ To the extent that **our judgmental interpretations become data, our tissue interpretations become the arbiters of patient care management decisions**.
- ⌘ In a more global sense, we **support highly successful cancer screening programs, and play critical roles in the multidisciplinary management of complex patients**.
- ⌘ **The true error** is for the clinical practitioners of 'EBM' to forget the contribution to the supporting evidence base of the physicians that are Anatomic Pathologists.

**Parting Thought...**



**One man can be a crucial ingredient on a team, but one man cannot make a team.**  
~ Abdul Kareem Jabbar 1947-, American Basketball Player

(End, 5)