Scientific Frustration, Fraud and Plagiarism in Biomedicine

Sir,

We thank and congratulate the Editorial Board of the Journal for acting ethically and retracting the plagiarized article, published earlier.1,2 The superb editorial, in the same issue, has covered the topic of plagiarism well, with many quotations and website-references!3

The root issue of “publish and prosper” has been highlighted, on several occasions, by debates amongst the science leaders and politicians. When a series of suicides of scientists occurred at the eminent Agriculture Research Institute, a national debate had ensued: The suicide of a brilliant agriculture scientist - Dr. Vinod Shah - a cousin of Sri Viren Shah-Governor of Bengal and the brother-in-law of Prof. Manu Kothari, had precipitated a crisis in the nation’s conscience. His suicide note stated, “I think the time has come again when a scientist will have to sacrifice his life in disgust so that other scientists may get proper treatment”.4

The suicide was perceived by R. Viswanathan, quite negatively, “I have no sympathy for any scientist who rushed to commit suicide. Only a person who is emotionally unsettled will resort to suicide just because he could not get promotion is psychologically unfit for promotion”.5 As per the investigation, Shah was not willing to fudge the amino acid data, as implied by his boss. At that meeting of the Society for Parliamentary Affairs, I had confronted Viswanathan, “The remark about the scientist being emotional or unbalanced, as pointed out without any evidence, is not only uninformed but also uncouth and without a shred of civic decency. If the genuine scientists were not emotional, they would lack the strong motivation and persistence needed for original research”;6 I had cited Hermann Hesse, the Nobel Prize winner in literature, “To ‘suicide’ belong plenty walking dead, whose life is story of continuous compromise with principles and many of them crowd our several living graveyards of scientific institutions”. So often fraud goes undetected and even rewarded. Young and brilliant scientists feel frustrated and often turn away from science.

The “living graveyards” often generate frustration, fraud and plagiarism. The frustrations and peer pressures were well recognized. Indira Gandhi, addressing the Indian Science Congress, had stated, “Many scientists feel frustrated. Research institutions suffer from lack of flexibility. Certain tasks cannot be carried out owing to procedural difficulties. There are also unnecessary irritations from the interference of the bureaucracy at headquarters. We are not getting all the returns possible from our investments in scientific research. Nor are we utilizing the talents of our young people in the best manner”.5

Despite the awareness of the sad state of Indian biomedical sciences, relatively little has been done to evolve a system of checks and balances to prevent scientific misconduct and punish the fraud. Bureaucracy still strangles Indian research. For example, despite the awards of peer-reviewed grants, the “babus”, of the Research Councils in New Delhi, delay the release of funds for months and years. Some urgent steps are called for to ensure ethical scientific research and publications. It is desirable to organize a meeting of the editors and science leaders, to evolve mechanisms at the institutional and national level to punish theft of ideas, experimental data or other’s printed words in science.

In my long career in biomedical sciences (circa 40 years), several of my ideas, observations and data have been thwarted, stolen outright or used surreptitiously. At that time it indeed did hurt. But eventually one learns that one’s ethical values, despite the trauma, need to mellow oneself and not be embittered. I once again congratulate the editor for taking bold steps to retract a plagiarized article.

ADB Vaidya
Medical and Research Director, Bharatiya Vidya Bhavan’s SPARC, Vithalnagar, JVPD, Mumbai 400 049, India.

REFERENCES

Endothelium-Dependent Brachial Artery Flow-Mediated Vasodilatation in Patients with Diabetes Mellitus With and Without Coronary Artery Disease

Bhargava and coworkers1 set out to find whether endothelial dysfunction is present in patients with diabetes mellitus (DM) without coronary artery disease (CAD) as compared with those with DM but without CAD. If so, they could have studied groups 2 and 4 only. However, their study

© JAPI • VOL. 52 • SEPTEMBER 2004 www.japi.org 759
had a factorial design, with 2 factors (DM and CAD) and 2 levels (present or absent), leading to 4 groups of subjects. I believe they should have analyzed the flow-mediated dilatation (FMD) data using analysis of variance (ANOVA) to examine any interaction between the factors and, if there was none, to examine the effect of each factor on FMD and its significance.

Even if the authors wanted to consider the study as having four parallel groups, the proper method for testing the significance of six possible differences among them would be ANOVA combined with a multiple comparison test such as Newman–Keuls', Scheffe's or Tukey's. These tests protect against the chance (in this case 1 - 0.95^6 = 0.27 or 27%) that multiple student's t-tests may show one of the six differences as significant when it is not.2

While I appreciate the authors' efforts and the importance of the problem they have studied, I believe the paper would have gained in value by matching the design of study with the appropriate methods of data analysis.

A Nanivadekar
Medical Research and Communication, Mumbai 400 050.

REFERENCES

Reply from the Author

I sincerely thank Dr. Nanivadekar for his valuable comments regarding our article. The present study was aimed at determining relative status, in terms of endothelial dysfunction of the patients who have diabetes mellitus or coronary artery disease alone or in combination. We wanted to find out whether patients with diabetes alone have equally impaired endothelial function as patients with CAD without diabetes and whether there was any incremental effect of the combination of the two. Hence we treated the four groups in our study as parallel groups and compared each other using Student's t-test to determine the significance of difference between the two groups in each pair. Though ANOVA with multiple comparison test might have been better, use of Student's t-test in this setting is not inappropriate and this is corroborated by several studies with similar design.1-3

RR Kasliwal
Senior Consultant Cardiologist, Escort's Heart Institute and Research Centre, Okhla Road, New Delhi 110 025.

REFERENCES

Absence of HLA B*46 in Indian Population: Could It Be the Cause for Protection from SARS Epidemic?

Sir,

Severe acute respiratory syndrome (SARS) is an emerging infectious disease appearing in early 2003, resulting in 8449 probable cases and 916 deaths around the world as of the August 2003 end (WHO).1 It is a new disease, which causes severe morbidity and mortality. Much is unknown about the true nature and long-term effects of SARS disease. Further it has created international anxiety because of its novelty, communicability and the fear of global pandemic. A completely sequenced single stranded positive RNA virus, novel coronavirus (SARS-CoV) isolated from the respiratory secretions of patients and has been implicated in the causation of SARS. SARS clinically presents with high-grade fever, chills and rigors, myalgia, headache, cough with or without sputum production, dyspnea and dizziness. Further the clinical features of the disease in adults are similar universally. The mean incubation period of the disease is estimated to be 64 days, from the onset of the clinical symptoms to hospital admission being 3-5 days with longer times earlier in the epidemic. India, which has the world’s second largest population, recorded its first confirmed case of SARS virus on the 17th of April 2003 from Goa. Consecutively three persons belonging to a family testing positive from Maharsashatra. Altogether three SARS confirmed cases were reported from India until Aug 2003.4 All of them have recovered from SARS disease. Recently, HLA association studies on the health care workers infected in Taiwan by SARS showed that its severity was significantly associated with HLA class I allele HLA B*4601, while the normal indigenous Taiwan people represented a high frequency of HLA B*46 in Indian population. The published HLA data on these high-risk alleles defined serologically in normal individuals belonging to different population /caste and tribal groups showed that the distribution of HLA B*46, the SARS associated allele in Taiwan, is very less among the Indians. Further molecular PCR based sequence specific oligoprobe subtyping in 423 individuals
China, surprisingly the disease spread was mostly confined to southern Asian populations such as Hongkong people, Vietnamese, Singaporeans and Taiwanese. Density of the population favored the growth of epidemic. Interestingly, the SARS associated allele HLA B*4601/B46 has been seldom observed in Indians as in other European populations where very few cases of SARS infection are reported. On the contrary the globally HIV associated HLA B35 allele has revealed a novel B*3520 allele to be associated in Indian AIDS patients. It is very well known that the presence or absence of a particular HLA allele in the population appeared to be an important element that acted during the outbreak of any epidemic. The Indians were probably protected because of the absence of HLA B46/B*4601 from SARS epidemic but will they be the same way protected if there is an AIDS epidemic occurs.

**S Umamathy**
HLA Department, Institute of Immunohaematology, 13th Floor, KEM Hospital, Parel, Mumbai 400012.

**REFERENCES**


**Miliary Tuberculosis with Bilateral Tuberculous Psoas Abscess Drained with Percutaneous Catheter**

Sir,

Skeletal tuberculosis (TB) constitutes 35% of extrapulmonary disease with involvement of spine in 50-60% of the cases. Tuberculosis ilio-psoas abscesses are usually secondary to vertebral or sacroiliac involvement. Chemotherapy alone is generally sufficient for smaller abscesses. However, larger abscesses require some sort of adjuvant drainage. Needle aspiration is frequently not successful and such cases are traditionally subjected to surgical drainage. Percutaneous drainage (PCD) in abdominal abscess is now an established mode of treatment. But, only limited literature is available regarding percutaneous drainage in ilio-psoas abscess.
Twentyfive years female presented with history of secondary amenorrhoea for a period of one year after childbirth. She also complained of fever and low backache. On ultrasonography of pelvis and abdomen, bilateral tubo-ovarian masses were suspected. Chest radiograph revealed bilateral military mottling with collapse of D10-12 vertebrae. Computed tomography of spine revealed bilateral psoas abscess with evidence of TB spondylitis in D10-12 and L5-S1 vertebrae, destruction of vertebral bodies and hepatosplenomegaly. A pigtail catheter was inserted in right lumbar region under ultrasound guidance. Left sided abscess showed multiple loculations, hence could not be drained. Post-catheterization CT scan (Fig. 1) revealed significant reduction in the size of abscess. Culture for aerobic bacteria and Mycobacterium tuberculosis were negative. Patient responded to drainage of the abscess and empiric treatment with specific antituberculosis drugs.

Technique of PCD is similar to open surgical approach. The catheter is required to be placed under CT or ultrasound guidance. It is recommended that the catheter should be kept in place till drainage is less than 10ml and patient has received more than four weeks of treatment. Abscess associated with extensive vertebral and spinal lesions are not drained, as PCD alone is not useful, patients need to be subjected to surgical modality of treatment. More studies are required to verify the efficacy of PCD in psoas abscess. Psoas abscess is not the presenting feature of miliary tuberculosis. So far we have come across only one similar case in literature, where tuberculous spondylitis is associated with miliary tuberculosis.

Dipti Gothi*, JM Joshi**
*Lecturer; **Professor and Head, Department of Respiratory Medicine, BYL Nair Ch. Hospital, Mumbai Central, Mumbai - 400 008.

Received : 25.03.2003; Revised : 29.09.2003; Re-Revised : 16.12.2003; Accepted : 4.4.2004

REFERENCES


Announcement

4th International Symposium on Diabetes

Core Curriculum by Division of Endocrinology, Mayo Clinic, Rochester, Minnesota.

Course Directors : Robert Rizza, K Sreekumaran Nair

Dates : 7th, 8th and 9th January 2005

For further details contact

Dr. Ashok Das, Organising Chairman, Mobile : 98470 82226 e-mail : ashok_das82@hotmail.com or

Dr. Shashank R Joshi, Organising Secretary, Mobile : 31022548 e-mail : srjoshi@vsnl.com