Correspondence

Lymph node biopsy audit in a private hospital

We did an audit of all lymph node biopsy reports done between June 2008 and March 2011 to ascertain the disease spectrum in our hospital and to assess what errors were made during interpretation, so that the lessons learnt could be used to try to reduce such errors in the future. There were 118 lymph node biopsies (male: 57, female: 61, age range 10 months to 82 years). Fourteen patients were <16 years of age. The sites of biopsy were neck (64), supraclavicular (11), axilla (18), abdomen (4), mesenteric and inguinal (3 each), iliac, submandibular and retroperitoneal (2 each) and peri-iliac, scalene, portal, portocaval, para-aortic, subparotid, peripancreatic, submental and unknown site (1 each).

The final diagnoses were tuberculosis (41), reactive (17), Kikuchi-Fujimoto disease (9), non-Hodgkin lymphoma (17), metastatic carcinoma (12), Hodgkin lymphoma (5), metastatic neuroblastoma and rhabdomyosarcoma (1 each), toxoplasma (3), sarcoid (2), dermatopathic lymphadenitis (2) and atypical reactive node, BCG adenitis, systemic lupus erythematosus, HIV, HIV with tuberculosis, Hodgkin lymphoma with tuberculosis, Castlemale disease and cat scratch disease (1 each).

We compared our data with the only similar paper from India that we are aware of, by Mohan et al., where they analysed 1724 lymph node biopsy reports over 12 years in a university hospital and found that approximately 35% had reactive nodes, 31% had tuberculosis and 25% had cancer.1 The incidence of the diseases in our practice was similar to theirs in some respects: tuberculosis formed 31.3% of their cases compared with 34.7% in our cases while malignancy was similar to theirs in some respects: tuberculosis formed 31.3% of their cases compared with 34.7% in our cases while malignancy was seen in 25.8% in their series and in 31.4% of our cases. However, non-specific lymphadenitis/reactive nodes were much more common in the study by Mohan et al. (35% compared to our 14.4%), Kikuchi-Fujimoto disease (2.1% to our 7.6%) and toxoplasma lymphadenitis (0 v. 3 cases) were lower in their series.

We made five diagnostic errors. Both of our cases of sarcoïdosis were detected only on a retrospective review and had been labelled as tuberculosis at first sign out. One node which we classified as low-grade non-Hodgkin lymphoma was diagnosed as high-grade non-Hodgkin lymphoma on expert second opinion. One node which was diagnosed as a metastatic small cell carcinoma was re-classified as a non-small cell carcinoma on the basis of immunohistochemistry. This patient died even before treatment was initiated. The correct re-classification of all cases was done before any kind of treatment was started. Thus, none of the patients were harmed by the initial misdiagnosis.

The comparatively high number of reactive nodes in the series by Mohan et al. probably reflects a university setting where teaching surgery and pathology forms an important part of the service, whereas ours is a private hospital and financial considerations (i.e. reducing costs to the patient) are of paramount consideration. It is also possible that the increasing use of fine-needle aspiration cytology in recent years has led to a reduction of lymph node biopsies. Finally, the core areas of our hospital are medical and surgical gastroenterology as well as orthopaedics, which are fields where lymph node biopsies are not commonly done. It is, of course, possible that toxoplasmosis was classified with the non-specific adenitis group by Mohan et al. The difference in the data for Kikuchi-Fujimoto disease and toxoplasmosis may be a combination of the fact that not all pathologists are aware of the diagnostic features of these entities and the bias of one of us (SAP) having a personal interest in these two entities.

Audit in medicine forms an important part of the process of quality improvement and learning. Retrospective audits of clinical and pathological material are a means of evaluating data from a medical institution. The data generated may be of use for judging whether the approach used thus far has been appropriate and can help guide processes in the future. Analysis of the data may also show whether any specific pattern is emerging, especially in areas where there is little data from India. Our data show that toxoplasma lymphadenitis and Kikuchi-Fujimoto disease are probably still not recognized by many pathologists. Finally, it acts as a reminder that the tendency to label every granulomatous lymph node as tuberculosis without first considering the possibility of sarcoïdosis or considering the clinical picture can be hazardous.

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Sonography: The veritable punching bag

The recent nationwide male:female sex ratio statistics have once again brought the serious issue of female foeticide to the fore. If newspapers are to be believed, the health ministry is planning to further tighten the norms for stand-alone ultrasonography clinics in India.1 Ultrasound practice, which has seen ever-increasing encroachment by non-radiologists, has already been curbed by the Pre-conception and Pre-natal Diagnostic Technique (PCPNDT) Act, may become even more difficult.

Every time the issue of female foeticide is brought up, the government makes ultrasonography the scapegoat. It is like banning the use of syringes to curb drug addiction! Even after the implementation of PCPNDT norms, the fall in the sex ratio continues unabated.2 What these rules have successfully done is to make life more miserable for honest ultrasonologists, who are left at the mercy of corrupt officials. Every monitoring or licensing body in India is more of a tool for public harassment.

Like every other good thing, ultrasonography has been misused by those with perverted minds. It is the grossly distorted belief system of our society which is responsible for female foeticide, and not the science of ultrasonography. There is no point chopping off the
Accuracy of medical certification of the cause of death in a rural non-teaching hospital in Delhi

Medical certification of cause of death (MCCD) statistics are of immense value in analysing the health trends of a population and are the backbone of national health policy and planning. In India, MCCD follows the WHO recommendations and is classified according to the International Classification of Diseases-10 (ICD-10). The mechanisms of death and aetiologically non-specific conditions are not acceptable as the underlying cause of death. Many studies have documented inaccuracies in death certificates ranging from illegibility and incompleteness to inaccurate causes and manner of death leading to errors in mortality statistics.

We did a review of the death records in a non-teaching multi-specialty government hospital in rural Delhi to identify the errors in completion of death certificates. All original death certificates of in-hospital deaths from January 2008 to July 2010 were retrieved for analysis from the medical records department after taking approval from the hospital administration. Certificates were checked for six types of errors based on the Myers and Farquhar method. Two authors independently verified each certificate for errors. A list of unacceptable mechanisms of death and aetiologically non-specific conditions was made to ensure consistency in the review process.

Of the 688 certificates reviewed, 494 (70.5%) had at least one major error. Minor errors were even commoner, with the omission of time intervals being the most frequent (Table I). Overall, 430 certificates (62.5%) had both a major and a minor error. Only major or minor errors were seen in 64 (9.3%) and 180 (26.2%) certificates, respectively. Only, 14 certificates (2%) were without any error. Further, the problem was common to various disciplines in the hospital (Table I). In addition, 36 (5.1%) certificates did not have the doctor’s signature and some information was missing in 95 (13.6%) death certificates and 37 (5.3%) death reports.

Our study shows many errors in the completion of death certificates. Studies have shown an improvement in quality of death certification after imparting relevant training to doctors. The Central Bureau of Health Intelligence has introduced an ‘Orientation training course on ICD-10’ for capacity building among officials involved in preparation, handling and maintenance of health data. There is a need for more such training programmes to improve knowledge and skills in disease classification, coding and medical record-keeping to improve the quality of health information generated by hospitals and surveys. Further, such training may be most useful during internship or residency rather than during undergraduate training. It would also be beneficial for medical records departments of hospitals to have an appropriate mechanism for checking and providing feedback to doctors.

### Table I. Major and minor errors in death certification based on Myers and Farquhar method (n=688)

<table>
<thead>
<tr>
<th>Type of error</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major error</td>
<td></td>
</tr>
<tr>
<td>Mechanism of death listed without an underlying cause (mechanism or non-specific condition listed as the underlying cause of death)</td>
<td>494 (70.5)</td>
</tr>
<tr>
<td>Improper sequencing (sequence of events does not make sense; underlying cause of death not listed on the lowest completed line of part I)</td>
<td>17 (2.4)</td>
</tr>
<tr>
<td>Competing causes (two or more causally unrelated, aetiologically specific diseases listed in part I)</td>
<td>303 (43.2)</td>
</tr>
<tr>
<td>Competing causes (two or more causally unrelated, aetiologically specific diseases listed in part I)</td>
<td>174 (24.8)</td>
</tr>
<tr>
<td>Minor error</td>
<td></td>
</tr>
<tr>
<td>Abbreviations (abbreviations used to identify diseases)</td>
<td>610 (88.6)</td>
</tr>
<tr>
<td>Absence of time intervals (no time intervals listed in parts I or II)</td>
<td>442 (63.1)</td>
</tr>
<tr>
<td>Mechanism of death followed by a legitimate underlying cause of death (use of a mechanism, but followed by an aetiologically specific cause of death)</td>
<td>579 (82.6)</td>
</tr>
<tr>
<td>Mechanism of death followed by a legitimate underlying cause of death (use of a mechanism, but followed by an aetiologically specific cause of death)</td>
<td>121 (17.3)</td>
</tr>
</tbody>
</table>

ACKNOWLEDGEMENTS

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Co-curricular activities in medical education

The Medical Council of India (MCI) is introducing a foundation course which will start in the first year and will run through the duration of the undergraduate course. It will comprise some co-curricular activities (CCA) too. I wish to share our experience in the sphere of CCAs.

CCAs are a variety of activities that are conducted alongside the standard study curriculum to provide experience in active social interaction. These activities develop important qualities, such as leadership, ethics, self-discipline and self-confidence, and also provide an opportunity for healthy recreation. Most medical curricula are so packed that they do not afford any scope for these activities and hence, CCAs are usually fitted in outside the usual hours. CCAs are classified as core or main, and optional or secondary.

Core or main

Core or main CCAs aim to impart skills that every physician must learn, including group dynamics, team-building, communication skills, leadership and organizational skills, and time management. These are not taught formally in most medical schools.

At Seth G.S. Medical College, Mumbai, for the past 22 years we have been conducting a structured programme, ‘SHIDORI’ (meaning economics, as well as the rational selection of drugs. Students have found these interactive sessions beneficial and there are requests for more such sessions.

Optional or secondary

These activities may be divided into sports, cultural and literary. They are conducted by the student’s council or gymkhana of the medical college. The students may participate in individual or group sports. The cultural activities include drama and music, while the literary activities include editing/publishing magazines, and participating in and conducting quiz competitions and debates. The list of activities is unending and there is abundant talent among the students. Hobbies are practised for the sake of enjoyment and because they interest the students, rather than for financial reward. By engaging in a hobby, a student not only derives personal fulfilment, but can also acquire substantial skills, knowledge and experience.

Currently, there is not enough budgetary support for CCAs. The new MCI initiative is a positive step. It is the responsibility of teachers and all stakeholders to provide a supportive environment. Students enjoy CCAs, learn managerial skills, get a sense of achievement and remember these experiences for life. The networks formed during these activities are sustained throughout life. I remember my participation in CCAs during my student days with immense fondness. I wish all medical students would have an opportunity to do the same.

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Is vasovagal syncope really a diagnostic problem?

Syncope is a transitory symptom, the causes of which vary from benign to life-threatening. Depending on the age, syncopeal events occur among 15%–25% of the population. They account for 3% of all examinations in hospitals and up to 6% of all admissions. Vasovagal syncope (VVS) is the most common type of syncope, its incidence being 21%–43%. In typical cases, there is no structural pathology of the heart or arrhythmia, and the interictal blood pressure and heart rate are normal. We conducted this study with the aim of understanding the pitfalls involved in the correct diagnosis of VVS.

The study covered 70 patients (24 men, 46 women), 15–71 years of age, in whom VVS was verified by the head-up tilt (HUT) test. Before the HUT test was performed, the patients were examined by an internist, cardiologist and neurologist. The HUT test was done when previous examinations had not revealed the cause of disorders of consciousness. We evaluated the type of VVS, diagnoses of the patients at the time of admission and interictal EEG findings, and also
the presence of convulsions during the syncopal states. Thirty-five patients were vasodepressoric (50%), 19 cardioinhibitive (27.1%) and 16 intermediate (22.9%).

In 30 (42.9%) patients, the diagnosis at the time of admission was disorder of consciousness of an unknown aetiology, in 12 (17.1%) it was possible epilepsy, in 9 (12.9%) it was epilepsy and in 19 (27.1%) it was syncpe. The interiletal EEG was normal in 36 patients (51.4%), while non-epileptiform abnormality was present in 34 (48.6%) patients. Statistical comparison among particular types of VVS revealed a significant difference in distribution (p=0.017) and a strong association between the type of VVS and the EEG finding (Cramér V=0.35).

Convulsions were observed in 20 patients during the HUT test and 14 of these patients also had a history of convulsions. Statistical comparison of particular types of VVS showed a significant difference in the distribution of convulsions (p=0.003) and a strong association between the type of VVS and the occurrence of convulsions (Cramér V=0.40).

It is clear that when abnormal interiletal EEG findings and history of convulsions are present together, diagnostic errors are made and, in many cases, the result is an incorrect diagnosis of epilepsy. The statistical comparison of the occurrence of normal EEG findings and convulsions among particular types of VVS in our study suggests that clinically, there are fewer chances of making an incorrect diagnosis in patients with vasodepressoric VVS, and in whom there is a significantly higher occurrence of normal EEG findings and a significantly lower number of convulsions, than in patients who have VVS and in whom a tendency to cardioinhibition is observed. Our study also suggests that interdisciplinary cooperation in accurate diagnostics is needed in this field of medicine and that the HUT test has to be in the standard diagnostic algorithm in patients with failures of consciousness of an unknown cause.

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First cousin marriages: Genetic concerns versus value judgement

The USA has been witnessing vociferous campaigns supporting first cousin marriages. The campaigners provide scientific data apparently suggesting that there is only negligible evidence of increased risk of genetic and congenital malformation among the offspring of first cousins who are married.1 There is a growing demand that all legislation banning such consanguineous marriages in the USA be scrapped. The same sentiment is being echoed in India by rights-based groups upholding individual rights and the freedom to choose one’s life partner.

The risk of the offspring of first cousins being born with genetic abnormalities and congenital malformation is about 4.5%, compared to 3% in the offspring of unrelated couples.1 The reasons for first cousin marriages in India are rooted in social, cultural, economic and political issues. In the USA, where the prevalence of consanguineous marriage is <1%, even if the number of such marriages was to double, it would lead to an increase to a mere 2%. In India, where the prevalence of consanguineous marriage is nearly 30%2 (slightly higher in southern India),3,4 even a small increase would have a large effect on absolute numbers. Hence, the practice needs to be discouraged. The dilemma of individual rights and choices in human relationships is accentuated when stretched to domains such as homosexuality or incest within the family, since the two individuals are adults making an informed decision. Medically speaking, the risk of adverse genetic outcome in their offspring is the same.

Public health concerns with consanguineous marriages in India arise since the phenomenon of consanguinity is associated with increasingly inward-looking attitudes in the community, and are related to the political economy of land retention. The preference for consanguineous marriage has been attributed to tradition, the maintenance of family structure and property, the strengthening of family ties, financial advantages relating to dowry, a closer relationship between the wife and her in-laws, greater social compatibility and greater stability of marriage. Higher rates of consanguineous marriage have been associated with low socioeconomic status, illiteracy and rural residence.5 The practice of consanguinity declines as socio-economic status and literacy improve. Since it is largely practised in lower socioeconomic groups, it encourages a feudalistic mind set, and promotes existing flawed caste- and religion-based social structure. It compromises efforts at empowerment of women along with other efforts at social reform. Therefore, a consanguineous marriage is a sociological phenomenon and not a medical event. Genetic defects and development disorders in the offspring are just a small subset of the entire gamut of adverse outcomes arising out of such relationships. Hence, the consequence of such an arrangement and related issues should be seen beyond medical outcomes. We need to discourage consanguinity in our society because endogamy is as undesirable as polygamy. When the medical community discourages first cousin marriage it is more for the reasons of adverse health risk than out of value judgement.

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Height velocity in children with nephrotic syndrome

Growth in children with nephrotic syndrome can be affected by the disease itself and/or by the treatment, and the data regarding this are limited.1–5 We studied the height velocity in south Indian children with nephrotic syndrome and the factors influencing it. The study covered 45 children with nephrotic syndrome and an equal number of age- and sex-matched controls. The Indian Pediatric Nephrology Group recommendation was followed for the classification of nephrotic syndrome.4 The height of all the children was measured every 3 months for a period of 15 months using a stadiometer, taking the standard precautions. The height standard deviation score (Ht SDS) was calculated using the WHO growth chart and the formula1

\[
\text{Ht SDS} = \frac{X - \bar{X}}{\sigma}
\]

where \(X\) is the patient’s height, \(\bar{X}\) is the age- and sex-matched mean height of the WHO standard population and \(\sigma\) is the age- and sex-matched standard deviation of the WHO population.

The difference in the Ht SDS between the first and last visits was taken as ΔHt SDS. The SPSS/PC+ advanced statistics package was used to do the analysis. The Student t-test was used to compare the study and control groups, while the paired t-test was used to compare the change in the Ht SDS between the first and last visits. Pearson correlation was used to analyse the relationship between the steroid dose, duration of the disease and number of relapses with height velocity and ΔHt SDS. \(p<0.05\) was considered significant.

The mean age at presentation was 7.2 years and the male:female ratio was 1.8:1, which is similar to that in previous studies.6,7 Thirty-one per cent of the cases and 13% of the controls were below the 3rd percentile for height for age. Among the cases, infrequently relapsing nephrotic syndrome was more common than the other types. Table I shows the duration of illness, cumulative steroid dose and number of relapses for the various subgroups of nephrotic syndrome. There was no improvement in the Ht SDS in the steroid-dependent group from the first visit to the last visit, unlike the other groups. The mean ΔHt SDS for the cases (0.207 cm) was significantly lower (\(p=0.005\)) than that for the controls (0.384 cm). Similarly, the mean height velocity in the cases (6.37 cm/year) was significantly lower (\(p=0.001\)) than that in the controls (7.32 cm/year). This finding is similar to the study from Italy.4 Pearson correlation analysis showed a statistically significant negative correlation of height velocity and ΔHt SDS with the steroid dose, total number of relapses and duration of the disease. Donatti et al. observed that the patient’s age during the final consultation, his age at the end of steroid therapy, the duration of prednisone use and the total dose of prednisone were related to height percentile loss.8 Though steroid therapy can affect the height of children with nephrotic syndrome, their genetic background is likely to be the strongest factor influencing their final height.9 Our study focused on short-term outcomes and the follow-up of the different subgroups was disparate. Long-term follow-up of these children may be more valuable. Also, our study had a small sample size and a dropout rate of 18%, which is a major drawback.

Table I. Comparison of various subgroups of nephrotic syndrome

<table>
<thead>
<tr>
<th>Type</th>
<th>Relapse number</th>
<th>Steroid dose (mg/kg)</th>
<th>Duration of disease (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First episode</td>
<td>—</td>
<td>110.0 (2.3)</td>
<td>20.7 (3.5)</td>
</tr>
<tr>
<td>Infrequent relapse</td>
<td>3.56 (2.18)</td>
<td>286.4 (108.2)</td>
<td>42.4 (24.04)</td>
</tr>
<tr>
<td>Steroid-dependent</td>
<td>7.91 (2.3)</td>
<td>844.0 (255.8)</td>
<td>74.2 (31.72)</td>
</tr>
<tr>
<td>Frequent relapse</td>
<td>8.00 (1)</td>
<td>940.2 (272.8)</td>
<td>61.7 (26.03)</td>
</tr>
</tbody>
</table>

Values in parentheses are standard deviation

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