Letter from . . . Chicago

A little showmanship

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In the days when medicine was still a predominantly clinical discipline it was the custom to bring real live patients to the weekly teaching exercise known as grand rounds. The master of ceremonies on such occasions would introduce the patient with such words as "Mr Rumpelfinger, this is a group of doctors who are very interested in your case. . . ." Then somebody from the back row would ask about travel to Japan or Formosa—Taiwan not having yet been discovered in those days. The patient would be pleased by the interest his case had engendered; and the professor, gravely unwinding his six-foot-long bell stethoscope, would listen for 12 kinds of rales before discussing the usual and unusual causes of haemoptysis.

Two decades of molecular medicine and patient advocacy have changed the format of grand rounds, which nowadays consist usually of a resident reading out a protocol that everybody could have read without assistance in the first place. Yet the consulting physician who brings one of his private patients to the public hospital to show the students a particular clinical syndrome may recapture something of the atmosphere of the grand old days. The students, sitting in their short white coats around the conference table, welcome this glimpse into the "real world" and are impressed that important people, as opposed to those in a teaching hospital, may also harbour interesting diseases. The residents for once identify with their chief and daydream of the time when they too will be in high demand for their diagnostic skills. And the consultant, as he surveys the scene, quietly congratulates himself at having successfully staged this coup de theatre.

The patient, a prima donna of local society and pivot of many a charitable organisation, had complained to her local doctor of pain in the lower back and night sweats, but extensive testing had found nothing but a raised alkaline phosphatase concentration. Her symptoms persisting, a liver biopsy had been proposed, but the lady had sought a second opinion to determine if this was really necessary. By then the backache had subsided, the alkaline phosphatase was coming down, nothing but mild langour and an occasional spike of fever remained, and it all seemed to amount to some viral infection that was slow in going away. The visit to the teaching hospital had been arranged not so much to impress the students as to draw blood for convalescent viral titres. So all went well, but several weeks later the lady, still having an occasional bout of fever, was sent back to her doctor with the suggestion that perhaps one ought to rule out lymphoma. A computed tomography scan was normal, but the liver biopsy showed granulomas, as did the bone marrow examination. At this stage the patient broke out in a rash, more pronounced on the palms and soles, the serology turned positive, and advanced staining techniques showed that the granulomas in the liver and bone marrow were teeming with spirochetes.

"I could have told you about *her*," said an all-knowing observer of local society, who had known the patient for many years. But she had not known that other prominent figure who had come to the hospital stuporose, with unresolved pneumonia, a consolidated middle lobe, and renal failure from well-intentioned but excessive administration of gentamicin. He looked as though he was done for this world, especially when the bronchoscopist described how the entire right bronchus was encased in solid, craggy tissue right up to the carina. For several weeks he remained in a critical condition while his daughter hovered about the intensive care unit trying to make sure that the correct treatment was given, and struggling to reconcile the contradictory statements of several elusive specialists. There was clearly nothing much to be hoped for, they all told her, yet she continued her solitary vigil, refusing to give up, still hoping for a miracle. Then the extraordinary happened: the biopsy report from the lungs came back equivocal; the kidneys began to function after six weeks of anuria; and an excited bacteriology technician called that he had grown *Mycobacterium tuberculosis*. The man regained his strength and was soon strong enough to start yelling at the daughter who had spent the last two months sitting by his bedside—thus giving substance to Gibbons's comment that "the tears of a song are seldom lasting" and explaining why the tears of many daughters may also not last very long—despite the happy ending in this particular case.

Tuberculosis everywhere

Yet tuberculosis occurs no less frequently in irascible paterfamilias than in their virtuous daughters, and is clearly not confined to the lower classes of society. It is being discovered in people from all walks of life, not only in South-east Asian refugees, in illegal Haitian immigrants cutting sugar cane north of Miami, or in no less legal Mexicans washing dishes without a visa or a work permit. In Chicago the tuberculosis rate climbed by 20% last year, and although officials claim that the reported increase may be attributable to improved case-finding, many clinicians have reason to believe that a substantial actual increase has taken place. Tuberculosis seems to occur everywhere. It is seen in young people presenting with classical pulmonary symptoms. It was recently found in an old man being investigated for a 60-lb (27-kg) loss of weight, whose fluffy infiltrates and obvious cavities were inexplicably reported as cor pulmonale, despite the result of the *x*-ray examination having being normal a year earlier. And it occurred in one of the inner city's notorious patients, a drug addict known to at least seven hospitals in Chicago, a veritable museum of pathology, suffering as she also

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did of chronic hepatitis, sickle-cell disease, heroin nephropathy, and a positive serological test for syphilis. Unwilling ever to take antituberculous tablets, she died when she at last ran out of veins, but not before giving her mycobacteria to her boyfriend as well as presumably to several strangers. It is indeed this problem of compliance that makes the control of this disease so difficult now that the sanitaria have been closed, and locking up a patient to make them take their pills constitutes a violation of their civil rights. An estimated 15 million Americans are harbouring inactive tubercle bacilli in their body, waiting to break down at times of decreased resistance. In disease these organisms are becoming increasingly resistant to drugs—and a century after Robert Koch's great discovery the treatment of tuberculosis remains far from satisfactory.

Two reproductive systems

Also unsatisfactory was the case of the San Diego woman who began to gain weight after having an abortion and who eventually found out that she was four months pregnant. Unlike the English "mum in a million" who wept with joy after giving birth to two boys, one from each of her wombs, this Californian possessor of two reproductive systems was planning to file a "wrongful birth" suit against the doctor and his employers. Also in California, where most of these unusual events seem to happen, a 35-year-old woman gave birth to a baby after she had gone through the menopause three years earlier, even while she was taking oral contraceptive pills to relieve her hot flushes. And from San Francisco come the news of a woman giving birth to a baby under water, in a horse trough, and keeping it submerged for eight minutes while it "breathed naturally" through its umbilical cord. The parents, members of a rock-and-roll band, apparently learnt about this new method through contacts made while travelling on the road. A professor of obstetrics at Stanford University was unimpressed with the technique and called it the newest form of child abuse, because the oxygen supply from the placenta is reduced by one-half within two minutes after a baby is born. The parents, however, said that they had tremendous faith in the people who had done it before and thought underwater birth was a natural and safe approach. They were well pleased with their baby, who was very alert, very calm, not irritable, and very strongwilled, and they said that the obstetricians felt threatened because the birthing process had been taken out of their hands.

Yet since being born under water presents potential risks and no obvious advantages, it cannot be truly included into that category of clinical choices where the difference is so small that it hardly matters. Our clinical clerks, coming as they do from a background of physics, mathematics, and other precise sciences, are often taken aback at the empiricism on which many decisions in clinical medicines are based. Should we use diuretics or treat hypertension with a beta-blocker? When, in a particular patient, should we operate, induce labour, digitalise, anticoagulate, transfuse, or use placebos? The students are often shocked to see experienced doctors disagree vehemently about some seemingly important aspect of treatment. Montaigne, over 400 years earlier, was less suprised at these differences of opinion—indeed he wrote that, "if your doctor does not think it good for you to sleep, to take wine or some particular meat, do not worry, I will find you another who will disagree with him." And now from the computerised division of clinical decision making comes the news that in many of these cases the difference in outcome is so small that it hardly matters. It is often a toss-up, six of one or half a dozen of the other, suggest the results of formal decision-analysis studies, and Kassirer and Pauker[1] would include here the controversies about treating transient ischaemic attacks, asymptomatic primary hyperparathyroidism, ventricular extrasystoles, pulmonary embolism, and about whether to deliver babies in the hospital or at home, though not in a horse trough. Identifying "toss-ups" may have important financial consequences, in that third-party payers may feel less enthusiastic when it comes to paying large sums for very small differences in outcome; while in individual instances doctors and patients may lean towards a conservative approach, forgetting perhaps that the pen is mightier than the sword, and that the cost and potential side effects of powerful drugs may balance the discomforts and risks of a surgical procedure.

Smoking not a toss-up

Smoking, however, remains a clinical decision whose outcome can hardly qualify as a toss-up. This despite new evidence that nicotine has beneficial tranquillising effects, prolongs the emptying time of the stomach, increases satiety, and reduces the desire for sweets, thus enabling people to lose weight. While the incidence of many cancers continues to decline or remain stationary, carcinoma of the lungs now affects more men and women than ever before. Few are as fortunate as the man with inoperable cancer of the lungs who survived without treatment for 23 years. Explored in 1959 but found to have inoperable disease, he apparently decided to overcome his illness by eating "anything he could stomach." Not only did he gain 50 lb (22 kg), but, his *x*-ray film clearing, he lived to see his third child born, entertained two grandchildren at his 60th birthday, and joined the select group of 40 people with documented cancer that had remitted spontaneously and without treatment. Yet his case should afford little hope to the 111 000 victims of lung cancer expected to die this year. Carcinoma of the lung now accounts for more than 25% of all cancers, is continuing to become more frequent, and, according to the American Cancer Society, in 83% of men and 43% of women is caused by smoking. Much hope has been pinned on interferon in the treatment of various cancers, yet a recent in-vitro study suggests that under certain conditions this agent could actually increase the invasive capability of some malignant cells.

Meanwhile, Cleveland neuro-oncologists are using mannitol and other substances to allow anticancer drugs to pass through the blood-brain barrier; studies by the National Cancer Institute indicate that Hispanics (American Mexicans and Puerto Ricans) develop at least one-third fewer cancers than other Americans, perhaps because their diet is low in meat and high in protein from legumes such as beans; a small Indiana town some 25 miles (40 km) from Chicago reports a greatly increased incidence of cancer and Hodgkin's disease but nobody knows why; and the Government has added 63 new chemicals including saccharin, reserpine, phenazopyridine (Pyridium), iron dextran, thiotepa, and chlorambucil to its list of 25 substances known or expected to be capable of causing cancer in mice or men. Another 100 carcinogens will be included within the next few years and thus will cover all the important carcinogens. One drug, chloramphenicol, was dropped from the list because it was exonerated earlier by the International Agency for Research on Cancer.

Finally, to return to showmanship in medicine, I must close with an old story about a famous neurologist. He was a great teacher, with a strong sense of the dramatic, and his clinical demonstrations at Queen Square were always well attended by postgraduate students from every part of the British Commonwealth. One day, as a patient with sensory loss was presented, the great man promptly diagnosed leprosy, and to make his point stuck a pin in one of the anaesthetic areas. Two things happened at this moment, almost simultaneously. The patient let loose a loud scream and fled from the room; and a young Indian doctor, sitting in the front row of the amphitheatre, was heard to exclaim, "My goodness gracious me, this is not leprosy."

Reference

[1] Kassirer JP, Pauker SG. The toss-up. *N Engl J Med* 1981;**305**:1467-9.