Case–Based Teaching in Undergraduate Medical Education and the Perception of Prejudice

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As the Co–Chair of the hepatobiliary week of the GI block of the course Foundations of Medicine 424, it has come to my attention that there was concern amongst some in the second year class that one of the viral hepatitis teaching cases, presented during a liver seminar, perpetuated a stereotype of a particular demographic group. This is unfortunate as the purpose of the case was to stimulate discussion about risk factors for a specific disease process. The case, based on a real clinical encounter, also reflected the clinical scientific literature of the disease entity in question and was therefore evidence–based. Epidemiology is the scientific study of populations and diseases and unfortunately, in this regard, there is no medical equality. The truth is that specific populations are at a greater risk for certain diseases and to ignore this fact in medical education would be a great disservice to the patient community. Since case–based teaching is currently preferred over the purely didactic teaching methods of yesteryear, it will be inevitable that a teaching case may feature an example from a specific demographic group of society. Although it may appear to some that this is simply the reinforcement of a stereotype, it must be appreciated that the intent is purely for clinical teaching and that there is a significant difference from the historical caricaturized portrayals of a demographic group in the entertainment/political industry and the non–medical media. To take this academic argument to the next step, if teaching in this regard is prejudicial, then by extension medical research on specific populations, and the dissemination of those research findings, may also be prejudicial. Clearly curtailment of this academic activity for political reasons would not be in the best interests of those at risk for specific diseases.

Although I appreciate fully that the history of modern medicine has a dark chapter characterized by racism (both overt and subtle), gender bias, intolerance of same sex relationships and religious bias, I would like to believe that this is not the situation at the University of British Columbia. Such prejudices and biases are unacceptable at any university anywhere and I personally would be the first person to aggressively protest should these elements arise in the future. Clinical teaching must reflect truth and reality but with the understanding that it is free of bias and arbitrary subjective value judgements.

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Talking Cancer Genomics, Treatment, and Research with Dr. Torsten Nielsen

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The British Columbia Cancer Agency (BCCA) is British Columbia’s leading cancer research and treatment center. The agency is responsible for providing cancer screening, diagnosis, and treatment, in addition to conducting cutting-edge research. Although the BCCA’s research scope is broad, some of the most exciting projects are in the field of medical genetics and genomics. One of the leading scientists whose clinical duties and research revolves around medical genetics and genomics is Dr. Torsten Nielsen. We sat down with Dr. Nielsen to discuss his role in the agency, lifestyle, and what interested him in this field in the first place.

Dr. Nielsen is a clinician-scientist in the department of Pathology and Laboratory Medicine in addition to being a professor in the Departments of Orthopaedics and Urological Sciences.
Based at the Vancouver General Hospital and the BCCA, he works out of the division of Anatomical Pathology, the Genetics Pathology Evaluation Centre, and the Centre for Translational and Applied Genomics. These roles are in addition to his teaching and administrative duties in the Faculty of Medicine (he is the associate director of the MD/PhD program) and his participation in clinical trials.

Dr. Nielsen divides his time between clinical work and research, but explains that “when you are a clinical scientist your clinic work always comes first. You have to do clinic work really well as it’s a life and death issue.” Dr. Nielsen’s clinical work focuses on bone and soft tissue pathology, especially sarcomas—a cancer that affects mostly young people. In fact, he is considered the provincial expert in the molecular pathology diagnosis of sarcoma.

When asked if clinical genomics currently plays a role in the management of patients, he responded:

Yes...although this is an active area of research, there have been answers generated. For instance, there are genes... critical for a particular tumour type that we would not be able to recognize under a conventional microscope, so instead, we can use tests such as FISH [Fluorescence In-Situ Hybridization] or PCR-based gene sequencing that I, as a diagnostic pathologist, can order and interpret.

Dr. Nielsen explains that these tests can be used to confirm a diagnosis, or, as of recently, may be the principal method to diagnose specific malignancies. Moreover, these genetic tests can directly impact treatment. For example, in the case of gastrointestinal stromal tumours, pathologists like Dr. Nielsen can test for specific genetic markers like the c-kit oncogene that, if present, allow physicians to administer targeted biologic therapies such as Imatinib.

Further, he explains that “clinical work is very important, but it is sometimes challenging to integrate with your research.” However, he does manage to make time for family, recreational activities, and sports.

Throughout the interview, Dr. Nielsen showed a tremendous passion for all of his work. This passion is the reason he got involved in cancer research in the first place:

[...when I was a kid I was inspired by Terry Fox, I was 11 years old when he was running across the country. I knew then I wanted to be a cancer researcher, so I took a straight line towards that. And what I find neat is that I work on the kind of disease that Terry had - sarcoma. My first grant was from the Terry Fox foundation, and that was what got me started on my career and I haven’t looked back since. I’m proud of that, and I’m proud of the work I put in.]

Dr. Nielsen went on to say that,

[for] the disease Terry had... the cure rate was 15%, even with amputation, mainly because we didn’t have effective treatment for the metastatic disease. And that’s what killed Terry. But now the cure rate for his kind of sarcoma is 75 to 80%. And I feel that if we look at similar diseases, especially in the category of sarcomas, we might hopefully try to achieve similar cure rates.

We look forward to hearing about additional discoveries in this exciting and rapidly developing field of clinical genomics.

REFERENCES