Clinical utility of the Coombs test

The article by J. Manuel Zarandona and Mark Yazer on the clinical utility of the Coombs test prompts consideration of the pitfalls of a negative test result. Specifically, further evaluation will be required if a patient with clinically significant hemolysis has a negative result on Coombs testing.

A negative result on the direct antiglobulin test (DAT) may occur if there are low-affinity antibodies coating the erythrocyte surface that are removed in the washing process or by prior use of corticosteroid therapy. IgG antibodies and C3d complement are detected by the DAT; however, IgM and particularly IgA antibodies may not be detected by the polyclonal anti-human-globulin serum. Therefore, DAT using anti-IgA or anti-IgM antibodies may be required if the results of DAT with anti-IgG antibodies do not correlate with the clinical manifestations. Patients whose erythrocytes are coated with multiple immunoglobulins will have severe hemolysis and may need intensive therapy with immunosuppressive agents or even splenectomy.

At a major immunohematology referral centre in the United Kingdom, 124 of 52,355 patients had warm-reactive elutable IgA antibodies and of these, 6 had only IgA autoantibodies coating erythrocytes. It is known that IgA complexes can activate the alternative pathway, causing complement activation. Therefore, measurement of complement components C3 and C4 could prove useful in some situations. Splenic sequestration of IgA-sensitized erythrocytes may occur, and in-vitro analysis has shown that monocytes are involved in hemolysis of the sensitized erythrocytes. Naturally occurring antibodies of the IgM isotype, which bind complement and autoantibodies of this class, occur in conjunction with anti-IgG and or anti-IgA immunoglobulins. In-vivo autoagglutination of IgM antibodies can lead to multiorgan failure and is usually associated with a high mortality rate. Sokol and colleagues described 2 patients with only IgM autoantibodies who had chronic hemolysis, one of whom required splenectomy.

It is important that clinicians be aware of the limitations of biological tests and investigate further when a patient with severe hemolysis and organ involvement has a negative Coombs test result.

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Promotion of traditional lifestyles

Jeff Reading discusses some of the work being done to understand and alleviate the problem of diabetes among Aboriginal people in Canada. Although the risk factors associated with diabetes and hypertension within Aboriginal communities are now reasonably well understood, the prevention and control of these conditions are not straightforward. Genetic factors alone cannot explain the prevalence of these conditions; rapid changes in lifestyle leading to unhealthy diets and physical inactivity, now widespread in Aboriginal communities, are also involved.

There is a lack of trained community health workers, nutritionists and health educators who understand the cultural heritage of Aboriginal communities and their peripheral services. This must be remedied before effective diabetes programs can be developed.

Implementing proven behavioural interventions, especially those involving weight management, requires resources that take into account Aboriginal language, customs and cultural references. Furthermore, the problems of obesity and diabetes must be addressed in the context of the lifestyle “choices” available in productive communities. The promotion of exercise (as opposed to productive physical activities) is questionable if people do not have access to and cannot afford sports and recreational facilities.

The “best evidence” approach to the prevention and control of diabetes in Aboriginal populations must be comprehensive and multidisciplinary, taking into account not only biophysiologic and lifestyle influences but also the political-economic environment and social structures. Politico-economic policies and social structures conducive to healthy lifestyles must be ranked above health promotion and pharmaco-
logic interventions to control diabetes in Aboriginal people.

The question of what “best practices” mean for Aboriginal people, specifically in relation to traditional indigenous knowledge, is an area that deserves special attention. Community control and autonomy, a high level of social integration, community development and local control of health care systems may be important protective factors in preventing ill health and negative social outcomes among Aboriginal groups.

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Changing ethics:
Where to start?

Nuala Kenny’s editorial reminding us of Hippocratic ethics is thought-provoking.

Hippocrates was probably unburdened by the need for a hefty loan or mortgage to complete his medical studies. Persuasive efforts by the pharmaceutical industry and manufacturers of medical equipment were likely minimal or absent, as were the legal hassles and encumbrances for omissions and commissions, inadvertent or inadvertent, real or perceived. Conflicts of interest would have been minimal or lacking entirely. Furthermore, Hippocrates’ patients would have given him a fair share of their genuine love, respect, courtesy and trust, along with a dignified place in the society. This environment must have led to his proposal of a reasonable ethical code covering many different perspectives for patients who were not overtly demanding. However, even though he took all those perspectives into consideration, he could not have foreseen the factors that now influence the medical profession.

In those earlier times, society also had a code of conduct and certain moral values, which have conveniently been forgotten. Now, society remembers just the Hippocratic ethics to which the medical profession is bound. Things have changed for the medical profession over the years, and we can now either modify the ethics proposed a long time ago or we can try to change the factors that place an undue strain on those ethics. So where do we start?

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