Quality control and legal highs

The internet has had a significant impact on how members of the public may purchase medication and other health care products. It is now possible to buy almost any drug from websites (legal or otherwise). However, the question arises: what about the quality? There are many documented cases where an internet purchased product has been found to be of poor quality when compared to that obtained from more traditional sources such as a high street pharmacy. The paper by Davies (see also accompanying commentary by Jones) represents a quality control examination of internet purchasing with a difference: in this case, the authors analysed the contents of what are now known as ‘legal highs’ bought from a number of websites that specialise in this rising consumer area. A legal high is basically a drug that might have psychogenic effects but which is not as yet banned by legislation. Their use is common and has attracted both media attention and political concern. They represent a new development in the use of recreational drugs that has emerged as a result of two phenomena: the evolution of novel chemical compounds that have effects similar to more familiar illegal narcotics or stimulants (such as heroin and cocaine) and the use of the internet to purchase them. The authors found some variation with respect to the type and concentration of the chemical agents contained within the products they purchased. Of concern they found that cathinone and piperazine were common constituents of the ‘highs’ purchased. Both of these have significant side effects and toxicities. The pattern of recreational drug use has changed over the years and the physician needs to be aware of this trend. Of particular use is the list of the commonly used agents along with their associated colloquial street-names.

Repeat biopsy in celiac disease

Next to an old topic revisited: what is the benefit of repeat jejunal biopsy following the diagnosis of celiac disease and when should it be undertaken? Coeliac disease requires a lifetime commitment by the patient to a special diet with all the inconvenience and restriction that this involves. Hence there is a need to ensure that the initial diagnosis is correct and that there is an appropriate response to treatment. Many years ago I worked in the west of Ireland where childhood coeliac disease was relatively common. It was accepted practice then to undertake three jejunal biopsies: at diagnosis, following six months on a gluten free diet and then after a period of return to a gluten containing diet. This was cumbersome, costly and unpleasant for patients. So what is the current thinking regarding the role of confirmatory biopsies for recently diagnosed patients? From the retrospective study by Robins it would appear that the situation is far from clear. The authors point out that current guidelines recommend that a repeat biopsy should be performed 6 months after diagnosis and institution of a gluten free diet. 284 coeliac patients who had an initial and at least one subsequent biopsy were retrospectively studied. Most showed histological improvement by two years but a degree of variation was observed with only 35% showed a complete return to normal by that time. The finding from this study would suggest that for many patients repeat biopsy at six months may be premature; in many cases repeat biopsy has not been performed at this time and even if so, incomplete histological normalisation may be found. Re-biopsy is considered to be essential for proper follow-up of coeliac patients; further work is needed to determine the precise timing of this which may be guided by clinical status, symptom improvement and serological monitoring.

TB and malignancy

Falagas et al. consider an association between two significant causes of mortality and morbidity that has been known to exist for two hundred years. Tuberculosis (TB) and malignant disease represent significant threats to public health and the aim of
this study was to explore the nature of the relationship between these two common disease entities. A review of the literature was undertaken whereby the authors attempted to elucidate the association between TB and cancer in the broadest sense. Three types of association were defined as a result: (1) the development of cancer in the background of pre-existing tuberculous infection (2) the co-existence of TB and malignancy (3) the diagnostic challenge that results when the clinician is presented with the protean signs of both illnesses. The hypothesis that TB may represent a risk factor for the development of malignant disease is considered. TB is a cause of chronic inflammation, a process that is known to predispose to malignancy development. In addition Mycobacterium tuberculosis has the ability to cause DNA damage. The risk factors for both TB and cancer that are associated with smoking are also discussed. Perhaps the most useful clinical message from this paper is the reminder that TB and malignant disease may be mistaken for each other on first presentation, emphasising the need for vigilance.

Hypophosphataemia

We have published numerous papers in the journal within the broad theme of chemical pathology. As a result, previous papers have considered the role of sodium, potassium and calcium in disease processes. This month, the role of phosphate is considered. The latter plays a significant role in the functioning of cellular membranes, enzyme systems and nucleic acids. The review by Liamis pays particular attention to the development of drug induced hypophosphataemia which may be caused by the use of diuretics and bisphosphonates. Hypophosphataemia is also seen in chronic alcoholism and respiratory alkalosis and may be overlooked. Mild hypophosphataemia is usually asymptomatic; severe depletion of phosphate may result in significant organ failure if not detected and corrected.

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