

Vinyl chloride

what the spokesman said

R&S 004475

by our own correspondent

So much that we read is taken on trust. We scan our favourite daily newspaper and believe most of what we read. This is particularly so when the subject is largely beyond our own expertise. Even this illustrious journal is probably read, in the main, like this.

It is only when we read something about which we have inside knowledge that we realise how vulnerable the journalist really is when he reports the "experts". I have, on occasion, been misled, though it has been the exception rather than the rule. Nonetheless, the blame for such misquotation could be with the quoted rather than the quoter.

The same is not necessarily true for "the spokesman". I have an inherent mistrust of spokespersons. They are frequently not the experts. In a large government agency, the press office often labours under the misapprehension that the expert is so much a boffin that he cannot string together a sentence capable of being understood by anybody with an IQ of less than 150. Thus the interpreters step in: fed with scientific copy, they metabolise it into easily digestible form for the journalist chasing the story.

A spokesman should not be considered in the same light as the "reliable source close to the president/government/film star". The latter species is more likely to be the chauffeur/doorman/ex-mistress respectively. No, the spokesman is supposed to know the facts and is supposed to interpret them for wider consumption.

They frequently fail. The latest communication debacle I noticed was in *The Guardian* recently and concerned the report from the National Institute of Occupational Safety and Health in the US. The *Guardian* report faithfully outlined the evidence, recently published over there, that workers exposed to vinyl chloride monomer (VCM) have an increased risk of brain tumours compared with the general population in the US. Armed with this important story, the *Guardian* reporter contacted the Health and Safety Executive. Clearly, he (or she) wanted to pursue two angles: What was the HSE's reaction to the American news, and was there a similar problem over here?

The answers were reassuring (to the reporter perhaps) but amazing to me. The spokesman described the American report as "surprising". In answer to the second line of enquiry: no, there was no evidence of a similar problem here, hence the surprise. It is difficult to know how the spokesman arrived at such astonishing conclusions. One can only assume that that particular spokesman was an expert on Late Perpendicular English cathedrals, because he certainly knew nothing about toxicology or basic statistics. A first-year student in any biomedical science would have postulated that brain tumours were possible – even predictable – following vinyl chloride exposure.

This can be deduced on several levels of reasoning: firstly vinyl chloride – a known cause of liver tumours – is a fat-soluble chlorinated hydrocarbon. As such it is readily taken up by fat-rich tissue such as the liver and brain. Secondly, it was formerly under investigation as a possible anaesthetic gas. It must, therefore, have been rapidly absorbed into the central nervous system in high concentrations which were capable of being maintained for prolonged periods. If it is a carcinogen elsewhere such activity should also be suspected at sites of high, prolonged concentration. Thirdly, the original studies of VCM workers in Louisville, Kentucky suggested a high incidence rate of tumours at several sites including liver, bone marrow, lung and brain. Fourthly, the original animal studies pioneered by Maltoni and repeated by others noted an increased incidence of central nervous system tumours in mice.

Any of these pieces of information would point to a theoretical risk of brain tumours in men exposed to VCM and such suspicions would need considerable refutation to dissuade most experts from thinking that VCM was a potential brain carcinogen. But, I hear you say, no such evidence has been found in this country. True, it has not – yet. But the UK has many fewer workers at risk than the US. The chance of finding a rare tumour in smaller numbers is less than among larger numbers. There are fewer needles in the haystack because the well searched haystack is smaller.

Selikoff has described occupational cancer as a time-bomb. The exposures occur but the time-bomb takes 20-40 years to explode. The latent period is not over yet and we cannot say that the UK will get no cases of this brain tumour.

The final pointer to this being a likely occupational cancer risk is the fact that the American tumours so far discovered in this discrete occupational group are all of the same rare cell type. Explain that one away.

Definitive epidemiology on the subject is yet to be done, but sufficient evidence exists to generate grave suspicions that VCM or some other substance in these workers' exposure caused these tumours. Numerically the problem is relatively small compared with other VCM-related disease, such as peripheral arterial disease, but cancers are always important and their emotiveness stimulates enquiring journalists.

As I read the report, I spared a thought for the real experts at HSE and could almost hear their teeth gnashing as they read of the surprise their agency was supposed to be experiencing over the American news. It is worth remembering how spokesmen can be so ill informed. The story of the Texan brain tumours is timely, important, worthy of further research – but never surprising!