following day when she was shaken but otherwise back to normal.

Patients on a daily dose of 40 mg prednisone (or equivalent) may be at greater risk of steroid psychosis, and in Hall's series\(^1\) the shortest time of onset was two days, and that was on a daily dose of 60 mg. The case reported here is remarkable for the low dose involved and the speed of onset of the psychosis.

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CHEMICAL IMAGING OF THE BRAIN BY NMR

Str,—The medical applications of nuclear magnetic resonance (NMR) have received considerable attention in *The Lancet*.\(^2\) Typically, results display either the spatial distribution of mobile hydrogen (\(^1\)H) nuclei in a cross-sectional image of the human anatomy\(^3\) or profiles of the concentrations of \(^1\)H, phosphorus, or carbon containing biochemical compounds from a single localised region.\(^4,5\) Despite the different technologies required, imaging and chemical analysis of the body by NMR are compatible.\(^4,5\) We have now extended this approach to complete cross-sectional chemical imaging of the head.

Hydrogen in the body is predominantly found in two discrete chemical groups—namely as H\(_2\)O (water) and as —CH\(_2\), often associated with lipid.\(^5\) Separate images of either of these species are generated by saturating the NMR signal from the other species immediately before application of a conventional NMR imaging sequence. This procedure is analogous to solvent suppression techniques used in NMR spectroscopy.\(^5\) Its key advantage over three-dimensional Fourier transform chemical imaging methods\(^5\) is an n-fold reduction in scan time for an nxn point image. Thus chemical images produced by saturation can be acquired with the same spatial resolution and scan time as conventional \(^1\)H images.


MUCOSITIS AND \(\alpha\)-STREPTOCOCCAL SEPSIS IN BONE MARROW TRANSPLANT RECIPIENTS

Str,—Dr Ringden and colleagues (March 31, p 744) suggest a relation between oral herpes infections and \(\alpha\)-streptococcal sepsis in bone marrow transplant (BMT) recipients. The incidence of \(\alpha\)-streptococcal sepsis following the introduction of acyclovir was lower than it had been in historical controls. At the same time a change was made in graft-versus-host disease prophylaxis, from methotrexate to cyclosporin or methotrexate (in a randomised trial). It may not be appropriate to include patients receiving cyclosporin since they experience much less mucositis. Nor is it clear how many of Ringden's patients had oropharyngeal herpes infections.

At our institution herpes infects only a minority of BMT recipients. Furthermore, our data do not support an association between oral herpes infections and \(\alpha\)-streptococcal sepsis. From January, 1980, to June, 1983, 8 of 43 (19%) BMT recipients with oral colonisation by herpes during the neutropenic period had \(\alpha\)-streptococcal sepsis during the same period versus 33 of 167 (19.8%) without oral colonisation by herpes. The probability of incorrectly accepting no difference in incidence between the two groups (type II error) is \(\beta=0.07\) with a type I error \(\alpha=0.05\). Thus, the presence of herpes simplex virus in the oral cavity did not influence the incidence of \(\alpha\)-streptococcal bacteraemia.

We agree with Ringden et al that the mouth is a likely source of \(\alpha\)-streptococci and that mucositis increases the risk of bacteraemia. Our data suggest that intense preparative regimens which increase mucositis also increase the risk of \(\alpha\)-streptococcal sepsis (table). Patients treated with increasing radiation dose to the oral cavity had mucositis also increase the risk of \(\alpha\)-streptococcal sepsis (table).

Our data suggest that intense preparative regimens which increase mucositis also increase the risk of \(\alpha\)-streptococcal sepsis (table). Patients treated with increasing radiation dose to the oral cavity had mucositis also increase the risk of \(\alpha\)-streptococcal sepsis (table). We believe that mucositis from multiple factors is an important

![CH2 and H2O images of a normal head compared with conventional 1H image.](image-url)