Drugs 1998 Oct; 56 (4): 627-628
0012-6667/98/0010-0627/$02.00/0

Edrecolomab (Monoclonal Antibody 17-1A)

A Viewpoint by John Zalcberg

Division of Haematology and Medical Oncology, Peter MacCallum Cancer Institute, Melbourne, Australia

For almost 100 years, scientists and clinicians have dreamt of the magic bullet – a targeted approach to cancer therapy using antibodies or other delivery systems that would be both highly specific and very active. Directed to the appropriate antigen, only present on tumour cells, the specific antibodies would deliver radioactive particles or cytotoxic agents to the cancer cells without affecting normal tissues. Alternatively, if not preferably, such antibodies might have the capacity to harness the body's own immune system, such that unlabelled antibodies would be active in their own right.

However, over the last few decades it seemed as if the magic bullet was more science fiction than reality with respect to the treatment of solid tumours. Tumour-specific antigens were difficult to define and the use of polyclonal and subsequently monoclonal antibodies was fraught with difficulties including lack of specificity and immunogenicity and apparent limited vascular access to actively dividing cells within the tumour. These difficulties appear to have been overcome for haematological malignancies given the recent approval of a monoclonal antibody (rituximab) for the treatment of non-Hodgkin's lymphoma.

It is because of these difficulties, among others, that the relatively recent report of a survival benefit with adjuvant edrecolomab (which recognises the human tumour-associated antigen CO17-1A) in patients with Dukes' stage C colorectal cancer was initially met with some scepticism. This was particularly so because the data on the use of edrecolomab (either alone or in combination with chemotherapy) in patients with advanced disease were inconclusive, in part because of a lack of randomised trials. However, with more mature follow-up these initial results in the adjuvant setting were confirmed and the oncology world is now eagerly awaiting the results of several definitive randomised studies in which edrecolomab either alone or in combination with chemotherapy is compared with standard chemotherapy regimens.

The place of monoclonal antibodies in the treatment of metastatic tumours has been consolidated further by a recent report of the successful use of an antibody to the HER-2-neu antigen in breast cancer, highlighting the capacity of antibodies to attack specific targets. Unfortunately, the function of the CO17-1A antigen is still ill-defined; however, a more detailed understanding of its role in tumour cells would help provide a scientific rationale for the use of edrecolomab in the treatment of cancers of the gastrointestinal tract. ▲