Antibody treatment (antiGD2) in High Risk Neuroblastoma CCLG Neuroblastoma Working Group Update

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Background

All children with cancer deserve treatment that is both the most effective available and safe. Children's cancer doctors (paediatric oncologists) around the world all agree that cancer treatments are best tested by treating patients within a clinical trial setting.

Treatment for High Risk Neuroblastoma patients is very complex and the current best results are obtained using a treatment protocol that includes many different types of anti cancer therapy; chemotherapy, surgery, radiotherapy and differentiating therapy. There are current ongoing clinical trials for children with High Risk Neuroblastoma in Europe through SIOPEN (the European Neuroblastoma Group) and in America through COG (Children's Oncology Group).

Antibody therapy (anti GD2) is a relatively new therapy being tested in neuroblastoma patients It may prove to be an important additional agent to the complex treatment regimens in current use but this can only be seen once it has been rigorously clinically assessed. As with other treatments it may be beneficial for some patients with neuroblastoma but not all.

Update of antiGD2 use in Clinical Trials

COG have used and tested an antibody in high risk neuroblastoma patients. The antibody was used in combination with other immune stimulant therapy in a clinical trial setting. Recent analysis has shown that patients who are in complete remission after induction chemotherapy, surgery and high-dose chemotherapy and receive the combined antibody therapy have an increased survival at 2 years from starting that treatment compared with patients who received retinoic acid alone. The longer term outcome is as yet unknown. The side effects to this treatment are very considerable and before this antibody can become standard treatment in the United States the FDA has decided that 100 more children must be treated and studied before it can consider if it is safe to give the antibody to all children with HR neuroblastoma in the US.

SIOPEN have produced an antibody that is similar to the American antibody although the method of production was slightly different. This antibody has undergone and passed extensive safety checks in the laboratory and has already been given to a few patients in the current HR NBL clinical trial in Austria, Italy and Israel. The antibody can only ever be given in countries whose regulatory authorities have approved of its use.
Following the recent announcement of the American results the European group has decided to amend how the antibody will be used in the SIOPEN High Risk Study. It will be given either alone or together with additional immune stimulatory therapy.

This is to try and determine if the “antibody alone treatment” is as effective as the combination treatment but less toxic. This amendment to the current high risk protocol is being prepared and will be put to all of the appropriate authorities in the participating European countries including the UK. Only when a country has had this amended HR protocol accepted as well as approval from its regulatory authorities to use anti GD2 will patients in the high risk study be able to receive this treatment. Anti GD2 treatment will not be available to any patient outside the context of a clinical trial until it has been shown to be both effective and have an acceptable safety profile.

Current Survival for High Risk Neuroblastoma patients in the UK

We are fortunate to have robust population based data for children with cancer in the United Kingdom. A recent analysis of those data shows that the 2 year survival of children with high risk neuroblastoma in the British Isles has steadily improved and is currently 59% at 2 years. Unfortunately we know this does not predict survival at 5 or 10 years for children with this aggressive disease in the UK or any other country.