Gene Therapy – Lessons Learnt

This guidance is in addition to the feasibility and set-up procedures that would normally take place when setting up a clinical trial within your team

Pharmacy

When approached about a possible gene therapy study, the PI or Clinical Trial Coordinator should contact the local Pharmacy team to notify them of the trial and begin feasibility discussions as soon as possible, as they will be heavily involved in the arrangements that will need to be put in place to deliver a gene therapy study.

Generally any information from the Sponsor on handling of the product from receipt on site to administration to the patient is helpful to know (the Pharmacy Manual/Investigator Brochure should be requested as soon as this is available).

ATIMP Policy

Any trials that involve Advanced Therapy Investigational Medicinal Products (ATIMPs: of which Gene Therapy is an example) should adhere to the local Trust's Policy for the Use of Advanced Therapy Medicinal Products. Consult your local Pharmacy team to find out which local policies are relevant and how to access these. It is important also to establish which key members of staff will need to be involved in set up, to ensure that they are included in communications from an early stage.

Risk Assessment

A local Risk Assessment will need to take place and it is likely that the gene therapy trial will need to be reviewed by one or more local groups or committees before it can be locally approved. Early contact with the chair of the Trust Genetic Modification Safety Committee is important to ensure feasibility, confirm local pathways and to signpost to further expertise if needed (e.g. Trust Infection Prevention and Control Team and Trust Waste officer). A Risk Assessment form may need to be completed and this will require input from the Sponsor, local pharmacy/gene therapy team, research nurses and other relevant staff. This form should be reviewed by the local Trust Genetic Modification Safety Committee (or equivalent). Check with your local R&D and Pharmacy teams to find out the specific requirements in your Trust.

Information on the legislation and risk assessment requirements is provided by the Scientific Advisory Committee on Genetic Modification (SACGM) compendium of guidance. This is available on the Health and Safety Executive website http://www.hse.gov.uk/biosafety/gmo/acgm/acgmcomp. Part 6 of the SACGM guidance relates specifically to clinical trials, however this is due for review and pre-dates the GMO (contained use) Regulations 2014 http://www.hse.gov.uk/pubns/books/l29.htm

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An important issue that may need clarification from the study Sponsor is surrounding Waste Management and guidance around potential viral shedding of the product after administration. Sufficient information may be contained within the protocol/Investigator Brochure but more information may be requested by local staff.

A Waste Management SOP may need to be developed to outline the arrangements for managing genetically modified waste. This should be developed in collaboration with the key members of the study delivery team (doctor, nurse, pharmacists) and your Trust Waste Manager or equivalent.

If the trial is to be run in more than one UK site coordination between trust specific Genetic Modification Safety Committees would be beneficial. Our recommendation is that the chairs of the committees discuss the study as soon as possible, and before an individual committee decision is reached. A central system to coordinate this (via a more established version of the DMD-Hub) could be considered.

It is anticipated that lessons, particularly around waste management and viral shedding, can be learnt from the first AAV trial and that the process of completing and reviewing the risk assessment form for subsequent trials may be accelerated.

Research and Development

As gene therapy trials are complex to set up, it is important to involve your local R&D team as early as possible, as they will be able to advise you regarding any specific local requirements for gene therapy trials.

Costing

As with every clinical trial, it is important to ensure that gene therapy trials are appropriately costed. If any measures need to be put in place that would not normally be required (e.g. particular equipment that is needed specifically for genetically modified waste, additional cleaning/ decontamination for locations where gm materials have been prepared/delivered), ensure that you include these when preparing the budget.

Costs should not be finalised until the Risk Assessment of the trial is complete/approved, as the Risk Assessment may require additional measures to be put in place (with associated costs that need to be added).

It is important to ensure that costing for nurse time is accurate as the nurses working on the trial will be spending a lot more time on a gene therapy ATIMP compared to a regular CTIMP (Clinical Trial of an Investigational Medicinal Product).