Importation of Holoclar

The Challenge

A specialist Advanced Therapy Medicinal Product (ATMP), known as Holoclar uses stem cells to treat sight loss due to physical or chemical burns to the eye. The treatment is made by taking healthy cells from the patient's uninjured eye and cultivating a new corneal epithelium – the clear 'barrier' that protects the eye. Holoclar is a Tissue Engineered Product (TEP) with a UK marketing authorisation manufactured by Holostem in Modena, Italy. Holoclar has been commissioned at specific sites within the UK for a few years, however, there has not been any delivery of the product. Since Jan21, medicines manufactured in the EU for the UK market must be imported by a wholesaler under the supervision of a Responsible Person for Import (RPi). Holostem have no legal presence in the UK, and therefore did not have the ability to perform this importation process, meaning many patients in the UK were losing out on this life-changing treatment. An added challenge with these stem cells is their short shelf life, as once the product is released in Italy it needs to be shipped, imported, received, and implanted into the recipient patient within 36 hours.

The Solution

Quality Assurance (QA) experts at The Newcastle upon Tyne Hospitals NHS Foundation Trust (NUTH), lead partner of the Northern Alliance Advanced Therapy Treatment Centre (NA-ATTC), collaborated with the manufacturer and then successfully negotiated and applied to the UK regulatory authority (MHRA) for the appropriate licensing. NUTH Pharmacy technical experts implemented systems which allowed for the importation of the product in a legal, virtual manner; meaning the product could be transported directly from Modena to one of the four commissioned sites in the UK. It also included a variation to NUTH's wholesale dealers license, and an introduction of the RPi to the associated governance and supporting technical and legal agreements.

The results

Holoclar, which is available to patients in several European countries, is now available for delivery to NHS patients in the commissioned and approved centres within England. Adam Walker, specialist QA Pharmacist at NUTH explains how the team worked to unlock access for the wider NHS - "Quality Assurance specialists from our pharmacy directorate worked extensively with Holostem to overcome the import challenge and develop appropriate regulatory

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authorisations. Our work addressed the previous supply constraints, making the treatment quickly and easily available for NHS use, so specialist centres can now restore the sight of the patients who receive it. Using the same authorisations, our team is now in a position to assist other manufacturers to offer innovative products within the NHS."

This new process was used for the first time in May22. A biopsy is taken from the patient and sent to Holostem, Modena where manufacturing commences in the laboratories on these sample cells. The time frame from the extraction of cells to implantation is variable, dependant on multiple factors, with the very first manufacturing stage taking approximately 3 to 4 weeks.

A video produced by the NA-ATTC featuring the QA experts from NUTH responsible for initiating this ground breaking access, explores the topic further and can be viewed here - Unlocking the availability of sight saving treatment for NHS patients v3 - YouTube. The NA-ATTC was instrumental in making resources available enabling discussions between Holostem, the MHRA and NHSE, as well as the clinical delivery sites.

Making further impact

Due to the success of overcoming the regulatory barriers and the facilitation by the NA-ATTC of what is now an established process, the work with Holoclar demonstrates the approach that can be used with other products. The skills and expertise of the NUTH QA team can be applied to other supply chain challenges in both marketed and investigational AT products.

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