Health Technology Briefing
March 2024

IgPro20 for treating dermatomyositis

Company/Developer	CSL Behring UK Ltd

☐ New Active Substance ☒ Significant Licence Extension (SLE)

NIHRIO ID: 28231	NICE ID: Not available	UKPS ID: 657473

Licensing and Market Availability Plans

Currently in phase III clinical development.

Summary

IgPro20 is in clinical development for the treatment of dermatomyositis (DM). DM is an inflammatory disease of the muscles and the skin which causes muscle weakness and severe skin rash. Although skeletal muscle and skin problems are the most frequent signs of the disease, inflammation may also affect the muscles of the oesophagus (the food pipe that leads from the mouth to the stomach), the lungs and the heart, leading to difficulties in eating and breathing. DM is an auto-immune disease. This means that it is caused by the body's immune (defence) system attacking its own tissues. The reason why the immune system acts in this way is not known. DM is a life-threatening and long-term debilitating condition due to the severe skin problems, muscle weakness and heart problems, and also because patients with the condition are at a higher risk of developing cancer. Many of the main treatments are not very well tolerated in the long term. Therefore, there is a need to develop new treatment options for DM.

IgPro20 is a form of immunoglobulin (a protein produced by cells in the blood). The active substance in IgPro20 consists mostly of immunoglobulin G, which is composed of a range of antibodies (protective proteins produced by the immune system in response to the presence of a foreign substance) involved in fighting organisms that can cause infection. IgPro20 works by restoring abnormally low immunoglobulin G levels to their normal range in the patient's blood. IgPro20 is administered through an injection under the skin. If licenced, IgPro20 will provide an additional treatment option for DM.

Proposed Indication

IgPro20 for the treatment of dermatomyositis (DM).[1]

Technology

Description

IgPro20 (Hizentra) is a form of immunoglobulin, a solution made from human plasma that contains antibodies.[2] The active substance in IgPro20, human normal immunoglobulin, is a highly purified protein extracted from donated human blood. It contains mainly immunoglobulin G (IgG), which is composed of a range of antibodies involved in fighting organisms that can cause infection. IgPro20 works by restoring abnormally low IgG levels to their normal range in the patient's blood. It can also help to control the immune system when it is working abnormally.[3]

IgPro20 is in clinical development for the treatment of DM. In the phase III clinical trial (NCT04044690), IgPro20 is administered subcutaneously.[1]

Key Innovation

Whilst there is no cure for DM, treatment options are used to help manage the symptoms.[4] Standard treatments are medicinal products that change/modulate the patients' immune response, however many of these medicines are not very well tolerated long term.[5] For example, considering their anti-inflammatory and immunosuppressive action, corticosteroids are considered as first-line treatment for DM. However, adverse events are a common concern for regular use of corticosteroids. The adverse events associated with long-term use of corticosteroids include suppression of adrenal functions, immunosuppression, and osteoporosis.[6] There is therefore a need for additional treatment options for DM.

Immunoglobulin (Ig), is often delivered intravenously (IV), and has been used successfully to treat myositis diseases. IgPro20 is delivered subcutaneously (SC), making it easier for the patient to self-administer.[2] SCIg may improve the quality of life for patients as it does not require venous access and is associated with more stable IgG levels, is able to potentially reduce the 'wear-off effect' and presents a lower incidence of systemic adverse events compared with IVIg.[7] If licenced, IgPro20 will provide an additional treatment option for patients with DM.

Regulatory & Development Status

IgPro20 currently has Marketing Authorisation in the EU/UK as a replacement therapy in adults, children and adolescents (0-18 years) in primary immunodeficiency syndromes with impaired antibody production, and secondary immunodeficiencies in patients who suffer from severe or recurrent infections, ineffective antimicrobial treatment and either proven specific antibody failure or serum IgG level of < 4 g/l.[8,9]

IgPro20 also currently has Marketing Authorisation in the EU/UK as an immunomodulatory therapy in adults, children and adolescents (0-18 years) for chronic inflammatory demyelinating polyneuropathy as maintenance therapy after stabilisation with IVIg.[8,9]

IgPro20 has an orphan drug designation by the US FDA in December 2018 for the treatment of DM.[10]

Patient Group

Disease Area and Clinical Need

DM is a progressive, inflammatory disease of the muscles and skin and one of the most common types of myositis.[11] Common symptoms of DM include aching and painful skeletal muscles and joints, tiredness, depression and a red heliotrope type rash on the hands or face. In addition, inflammation may also affect smooth muscles of the oesophagus, lungs, and heart, leading to difficulties in eating and breathing. DM is an autoimmune disease, where the body's immune system attacks its own tissues. The cause of DM is not fully understood, but it is likely to be due to a number of complex genetic and environmental factors. The adult form of DM can affect people of any age and gender, though it affects about twice as many females as males.[4] DM is a life-threatening and long-term debilitating condition due to severe skin problems, muscle weaknesses and heart problems, and also because patients with the condition are at higher risk of developing cancer.[12]

The estimated incidence of DM in the USA is 9.63 cases per million people.[13] In England, 2022-23, there were 1,965 finished consultant episodes (FCE) and 1,792 for other DM (i.e., non-juvenile DM) (ICD-10 code M33.1) which resulted in 2,408 FCE bed days and 1,581 day cases.[14]

Recommended Treatment Options

There are no treatment options recommended by NICE for DM.

Clinical Trial Information

Trial	**RECLAIIM; NCT04044690; EudraCT 2018-003171-35;** A Study to Evaluate the Efficacy, Safety, and Pharmacokinetics of IgPro20 (Subcutaneous Immunoglobulin, Hizentra®) in Adults With Dermatomyositis (DM) – The RECLAIIM Study **Phase III** – Active, not recruiting **Location(s):** Seven EU countries, UK, USA and other countries **Primary completion date:** June 2024
Trial Design	Randomised, parallel assignment, quadruple-blind
Population	N=126 (estimated); subjects diagnosed with at least probable idiopathic inflammatory myopathies (IIM); aged 18 years and older; disease severity defined by Physician global activity visual analogue scale (VAS) with a minimum value of 2.0 cm on a 10 cm scale and manual muscle testing 8 ≤ 142 or cutaneous dermatomyositis disease area and severity index (CDASI) total activity score ≥ 14.
Intervention(s)	IgPro20 (SC)
Comparator(s)	Placebo
Outcome(s)	Primary outcome: responder rate. A responder is defined as a subject with a total improvement score (TIS) ≥ 20 points at Week 25 and at least 1 of the previous scheduled visits (Week 17 or Week 21), who completes 24 weeks of randomized investigational medicinal product (IMP) treatment without the use of rescue corticosteroid treatment. The TIS is a sum response criterion which incorporates

	6 weighted IMACS core set measures (CSMs). Thresholds for minimal, moderate, and major improvement were ≥ 20, ≥ 40, and ≥ 60 points on the TIS. [Time Frame: Week 25] See trial record for full list of other outcomes.
Results (efficacy)	-
Results (safety)	-

Estimated Cost

IgPro20 is already licensed in the UK;[15]

- The NHS indicative cost of Hizentra (1g/5ml) solution for infusion is £87.50
- The NHS indicative cost of Hizentra (2g/10ml) solution for infusion is £175
- The NHS indicative cost of Hizentra (4g/20ml) solution for infusion is £350
- The NHS indicative cost of Hizentra (2g/10ml) solution for injection pre-filled syringes is £175
- The NHS indicative cost of Hizentra (4g/20ml) solution for injection pre-filled syringes is £350

Relevant Guidance

NICE Guidance

- NICE technology appraisal awaiting development. Abatacept for treating active idiopathic inflammatory myopathies (TA10993). Expected date of issue to be confirmed.

NHS England (Policy/Commissioning) Guidance

- NHS England. Commissioning Criteria Policy for the use of therapeutic immunoglobulin in England. 2021.
- NHS England. Clinical Commissioning Policy: Rituximab for the treatment of dermatomyositis and polymyositis (adults). 2016. 16036/P.

Other Guidance

- British Society for Rheumatology. British Society for Rheumatology guideline on management of paediatric, adolescent and adult patients with idiopathic inflammatory myopathy. 2022.[16]
- NHS Scotland. Clinical Guidelines for Immunoglobulin Use. 2021.[17]

Additional Information

References

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