Teprotumumab: Adis Evaluation

Clinical Considerations

- First-in-class monoclonal antibody that inhibits IGF-1R; administered intravenously
- Effectively reduces proptosis and other manifestations of TED, with long-term responses in most patients
- Generally well tolerated; adverse events are generally mild or moderate in severity

Plain Language Summary

Background and rationale

- Thyroid eye disease (TED) is an inflammatory disease that involves expansion of the soft tissue surrounding and behind the eye. It can lead to bulging of the eye(s), double vision, optic nerve compression and vision loss
- Traditional treatments are often unsatisfactory. Insulin-like growth factor 1 receptor (IFG-1R) signalling is implicated in the progression of TED, leading to the development of teprotumumab (TEPEZZA®)
- Teprotumumab, administered intravenously, is a first-in-class monoclonal antibody that inhibits IGF-1R

Clinical findings

- In clinical trials, teprotumumab was effective at improving bulging of the eye, inflammation, double vision and TED-related quality of life
- Almost one year after the cessation of treatment, clinical benefits endured in most patients
- Teprotumumab was generally well tolerated, with most adverse events being mild or moderate in severity
- Adverse events included muscle spasms, hearing loss and hyperglycaemia

Conclusion

Teprotumumab is the first targeted therapy approved for TED and represents an important advance in the management of this condition