



**Title** Oral Iron Chelator: Deferiprone

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**Reference** Technology Review Report, 009/07, 2007.  
<http://medicaldev.moh.gov.my/uploads/iron.pdf>

## Aim

To determine the safety, adverse events, and effectiveness of the oral chelator deferiprone (Ferriprox from Apotex, Canada and Kelfer from Cipla, India) in treating thalassemia.

## Conclusions and results

Many patients are successfully chelated at a dose of deferiprone 75 mg/kg/day (for both Ferriprox and Kelfar). Some patients may need higher doses (up to 100 mg/kg) or combination therapy of deferiprone every day and desferrioxamine on several days each week. Recent data suggest that deferiprone may be superior to desferrioxamine in protecting the heart from iron overload.

Side effects of deferiprone (both Ferriprox and Kelfar) – agranulocytosis, neutropenia, gastrointestinal symptoms, arthropathy, transient changes in liver enzymes, and zinc deficiency – are now well recognized.

Patients with thalassemia major and other transfusion-dependent disorders who are able to successfully control iron overload at a safe level with deferoxamine should be encouraged to continue with this approach to chelation therapy. Treatment with deferiprone should be carefully considered for patients unable to use deferoxamine, or for patients with an unsatisfactory response to deferoxamine as judged by liver iron and serum ferritin measurements, or evidence of cardiac iron overload or iron-induced cardiac dysfunction. At a deferiprone dose of 75 mg/kg per day, iron stores may decrease in some patients, remain stable in others, and increase in some others. Hence, careful monitoring of iron stores, preferably by measuring tissue iron and cardiac function, is important during treatment with deferiprone, as it is with deferoxamine. Enhanced iron excretion can be obtained at higher doses of deferiprone, or by combining deferiprone and deferoxamine therapy. Early studies of combined therapy are particularly encouraging, but these approaches have not undergone rigorous long-term testing for complications.

Although we focused on the use of deferiprone (either

Ferriprox or Kelfer) for thalassemia major, deferiprone may also play an important role in treating patients with thalassemia intermedia and other anemias who accumulate iron at lower rates than do those with thalassemia major.

## Further research/reviews required

The risks and benefits associated with deferiprone therapy should be studied further. All patients receiving the drug should be closely monitored since adverse events have been reported with deferiprone, manufactured by Apotex (Ferriprox), and more research data on the use of Kelfar is warranted.