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Questions and answers

Withdrawal of the marketing authorisation application for Mulsevo (semuloparin sodium)

On 5 July 2012, Sanofi-aventis officially notified the Committee for Medicinal Products for Human Use (CHMP) that it wishes to withdraw its application for a marketing authorisation for Mulsevo, for the prevention of venous thromboembolism in cancer patients receiving chemotherapy.

What is Mulsevo?

Mulsevo is a medicine that contains the active substance semuloparin sodium. It was to be available as a solution for injection in a pre-filled syringe.

What was Mulsevo expected to be used for?

Mulsevo was expected to be used for the prevention of venous thromboembolism (formation of blood clots in the veins) in cancer patients receiving chemotherapy (medicines to treat cancer) for solid tumours that have spread or started to spread.

How is Mulsevo expected to work?

Patients with solid tumours who are receiving chemotherapy are at an increased risk of blood clots forming in their veins.

The active substance in Mulsevo, semuloparin sodium, is an anticlotting agent. In the blood, it increases the activity of a protein called antithrombin III, which blocks the blood clotting mechanism. This is expected to reduce the risk of blood clots forming in the veins.

What did the company present to support its application?

The company presented the results from one main study involving 3,212 patients with cancer receiving chemotherapy. The study compared Mulsevo with placebo (a dummy treatment) given for the duration

of the chemotherapy. The main measure of effectiveness was the time until the patients developed a blood clot in the veins or in the lungs, or had died.

How far into the evaluation was the application when it was withdrawn?

The application was withdrawn after the CHMP had evaluated the initial documentation provided by the company and formulated a list of questions. The company had not yet responded to the questions at the time of the withdrawal.

What was the recommendation of the CHMP at that time?

Based on the review of the data, at the time of the withdrawal, the CHMP had had some concerns and was of the provisional opinion that Mulsevo could not have been approved for the prevention of venous thromboembolism in cancer patients undergoing chemotherapy for solid tumours that have spread or started to spread.

The CHMP questioned the relevance of the results from the main study to support the benefit of Mulsevo in the proposed indication, as Mulsevo only showed a small absolute reduction in the risk of developing venous thromboembolism. The CHMP noted that there were limited data beyond four months of treatment with Mulsevo. In addition, it was considered that the patients in the study were not entirely representative of the population in whom the medicine was expected to be used.

In terms of safety, the CHMP was concerned that there was an apparent increase in the number of patients whose cancer progressed during treatment with Mulsevo compared with placebo.

Therefore, at the time of the withdrawal, the CHMP was of the opinion that the benefits of Mulsevo did not outweigh its risks.

What were the reasons given by the company for withdrawing the application?

In its letter notifying the Agency of the withdrawal of application, the company stated that based on the feedback from regulatory agencies it decided to withdraw all applications globally.

The withdrawal letter is available [here](#). -

What consequences does this withdrawal have for patients in clinical trials?

The company informed the CHMP that as a consequence of the withdrawal the only clinical trial with Mulsevo that was ongoing had been terminated early.