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Questions and answers on the withdrawal of the marketing authorisation application for Recothrom (thrombin alfa)

On 11 December 2009, Bayer Schering Pharma AG officially notified the Committee for Medicinal Products for Human Use (CHMP) that it wishes to withdraw its application for a marketing authorisation for Recothrom, for use in stopping bleeding during surgery where standard surgical techniques are insufficient.

What is Recothrom?

Recothrom is a powder and solvent for solution to be applied to a surgical wound. It contains the active substance thrombin alfa.

What was Recothrom expected to be used for?

Recothrom was expected to be used to stop bleeding during an operation when standard surgical techniques are insufficient.

How was Recothrom expected to work?

The active substance in Recothrom, thrombin alfa, is a copy of thrombin, a protein that is found naturally in the blood. Thrombin converts another protein called fibrinogen into smaller units called fibrin. The fibrin particles then stick together, forming clots which help to stop the bleeding. Thrombin also helps to make specialised cells in the blood called platelets to stick together, forming clots which also reduce the bleeding.

Recothrom was expected to be applied to the surgical wounds either using a gelatin sponge soaked with the solution, or by spraying the solution directly into the surgical wound.

What documentation did the company present to support its application to the Agency?

The effects of Recothrom were first tested in experimental models before being studied in humans. The company presented results of one main study involving 463 patients undergoing different types of

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surgeries. The study compared Recothrom with another medicine containing thrombin and the main measure of effectiveness was the number of patients whose bleeding stopped within 10 minutes.

How far into the evaluation was the application when it was withdrawn?

The application was withdrawn at 'day 180'. This means that the CHMP had evaluated the documentation provided by the company and formulated a list of questions. After the CHMP had assessed the company's responses to the questions, there were still some unresolved issues.

What was the recommendation of the CHMP at that time?

Based on the review of the data and the company's response to the CHMP list of questions, at the time of the withdrawal, the CHMP had some concerns and was of the provisional opinion that Recothrom could not have been approved for use in stopping bleeding during surgery where standard surgical techniques are insufficient.

The CHMP was concerned that the company provided evidence from specialised surgeries, whereas Recothrom was intended for more general use. The Committee also noted that because the sponge and spray worked differently and should have been studied separately, there was not enough to determine the effects of the spray. In addition, not enough evidence was presented to show that Recothrom used with a gelatin sponge was more effective than a sponge alone.

Finally, there were concerns about the medicine that Recothrom was compared with (the comparator) in the main study. According to EU requirements, Recothrom should have been compared with a standard treatment that did not contain thrombin.

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

The letter from the company notifying the CHMP of the withdrawal of the application is available here.

What are the consequences of the withdrawal for patients in clinical trials or compassionate use programmes using Recothrom?

The company informed the CHMP that at this time there are no ongoing clinical trials or compassionate use programmes with Recothrom in Europe.