EMA/90994/2023
EMEA/H/C/005246

Byfavo (*remimazolam*)

An overview of Byfavo and why it is authorised in the EU

What is Byfavo and what is it used for?

Byfavo is a sedative medicine given to adults before a medical test or procedure to make them feel relaxed and sleepy (sedated).

Byfavo is also used in adults to bring about and maintain general anaesthesia (state of controlled unconsciousness to prevent pain during surgery).

Byfavo contains the active substance remimazolam.

How is Byfavo used?

When used as a sedative, Byfavo must be given by a healthcare professional experienced in sedation. A healthcare professional who monitors the patient must also be present while the procedure is being carried out. Resuscitation equipment and a medicine (antidote) to reverse the effects of Byfavo must be readily available.

When used for general anaesthesia, Byfavo must be given by a doctor trained in anaesthesia, in either a hospital or facility equipped for conducting surgery.

Byfavo is given as an injection into a vein. When used as a sedative, the dose depends on how sleepy the patient needs to be, on whether they are taking other medicines such as opioids, and on their age and weight.

When used for general anaesthesia, the dose depends on the response of each patient and the other medicines given to prepare the patient for surgery.

Byfavo can only be obtained with a prescription. For more information about using Byfavo, see the package leaflet or contact your doctor or pharmacist.

How does Byfavo work?

The active substance in Byfavo, remimazolam, belongs to a class of sedative medicines called benzodiazepines. It attaches to a specific site on the receptor (target) for the neurotransmitter gamma-amino butyric acid (GABA) in the brain. Neurotransmitters are chemicals that allow nerve cells to communicate with each other and GABA reduces electrical activity in the brain. By activating the

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receptor GABA-A, remimazolam reduces brain activity. The extent of the effects of Byfavo on brain activity depend on the dose given and the other medicines used during the procedure.

What benefits of Byfavo have been shown in studies?

Sedation

Byfavo was shown to be effective at sedating patients undergoing colonoscopy (a procedure to examine the colon through a tube with a camera) or bronchoscopy (a procedure to examine the lungs and airways using a thin, tube-like instrument) in two main studies.

In the first study, involving 461 patients, the colonoscopy was successful without the need for a significant number of top-ups or an alternative sedative medicine in about 91% (272 out of 298) of patients who received Byfavo. This compares with 2% (1 out of 60) of patients receiving placebo (a dummy treatment) and 25% (26 out of 103) of those receiving midazolam, another sedative medicine.

In the second study, involving 446 patients undergoing bronchoscopy, these figures were 81% (250 out of 310) with Byfavo, 5% (3 out of 63) with placebo and 33% (24 out of 73) with midazolam.

In both studies, the sedative effect of Byfavo started and wore off within minutes.

General anaesthesia

The efficacy of Byfavo for bringing about and maintaining general anaesthesia was shown to be comparable to that of propofol in two main studies. The first study involved 365 adults who underwent surgery and measured the time patients spent unconscious with a Narcotrend Index below or equal to 60 (Narcotrend Index is a measure of brain activity which indicates the level of unconsciousness caused by general anaesthesia. It ranges from 100 [awake] to 0 [very deep hypnosis]), with values below 60 associated with a low likelihood of consciousness). Patients given Byfavo had on average a Narcotrend Index score of 60 or below for 95% of the time during surgery. This compared to 99% of the time in patients given propofol.

In the second study, involving 391 adults who underwent surgery, loss of consciousness was achieved and maintained in 99% of patients given Byfavo and 100% of patients given propofol. The main measure of efficacy was the successful conduct of the surgery, measured by a lack of body movements and the absence of awakening or recall of the surgical procedure, and the need for other medications to maintain general anaesthesia during surgery.

What are the risks associated with Byfavo?

When used as a sedative, the most common side effects with Byfavo (which may affect more than 1 in 10 people) are hypotension (low blood pressure) and respiratory depression (inhibition of breathing). Bradycardia (slow heart rate) can affect up to 1 in 10 people.

When used for general anaesthesia the most common side effects with Byfavo (which may affect more than 1 in 10 people) are hypotension, nausea, vomiting and bradycardia.

For the full list of side effects of Byfavo, see the package leaflet.

Byfavo must not be used in patients who are allergic to remimazolam, other benzodiazepines, or any other ingredients of Byfavo. Byfavo must also not be used in patients with unstable myasthenia gravis (a disease causing muscle weakness).

Why is Byfavo authorised in the EU?

Byfavo is effective at sedating patients undergoing colonoscopy or bronchoscopy and is expected to work in the same way in other types of procedures of this kind. Byfavo starts acting quickly, allowing early start of procedure and its sedative effects disappear quickly, allowing patients to be discharged promptly. The efficacy of Byfavo in bringing about and maintaining general anaesthesia was shown to be comparable to that of propofol. Although the effects of Byfavo last slightly longer than propofol, it's effects can be reversed almost immediately with an antidote (flumazenil), unlike those of propofol. In terms of safety, Byfavo's side effects, including breathing problems, are considered manageable provided that patients are continuously monitored by a healthcare professional not involved in other aspects of the procedure.

The European Medicines Agency therefore decided that Byfavo's benefits are greater than its risks and it can be authorised for use in the EU.

What measures are being taken to ensure the safe and effective use of Byfavo?

Recommendations and precautions to be followed by healthcare professionals and patients for the safe and effective use of Byfavo have been included in the summary of product characteristics and the package leaflet.

As for all medicines, data on the use of Byfavo are continuously monitored. Side effects reported with Byfavo are carefully evaluated and any necessary action taken to protect patients.

Other information about Byfavo

Byfavo received a marketing authorisation valid throughout the EU on 26 March 2021.

Further information on Byfavo can be found on the Agency's website: ema.europa.eu/medicines/human/EPAR/byfavo.

This overview was last updated in 03-2023.