AstraZeneca

Clinical Study Results

Research Sponsor: AstraZeneca AB

Treatment Studied: Verinurad and allopurinol

Study Purpose: This study was done to learn how different ways of taking verinurad and allopurinol work in healthy participants

Protocol Number: D5495C00014

Thank you!

Thank you for taking part in the clinical study for the study drugs verinurad and allopurinol.

AstraZeneca AB sponsored this study and believes it is important to share the results. An independent non-profit organization called CISCRP helped prepare this summary of the study results for you.

If you participated in the study and have questions about the results, please speak with the study doctor or staff at your study site.

Who took part in this study?

The researchers asked for the help of healthy men and women. The participants in this study were 21 to 50 years old when they joined.

The study included 25 participants in Germany.

Why was the research needed?

Researchers are looking for a better way to treat both chronic kidney disease and heart failure. Before drugs can be approved for people to take, researchers do clinical studies to find out how safe they are and how they work.

Chronic kidney disease and heart failure are serious long-term health conditions. Having high levels of uric acid in the blood can worsen some of the symptoms of chronic kidney disease and heart failure. It can also increase the risk of developing these conditions. The study drugs, verinurad and allopurinol, were designed to reduce the amount of uric acid in the blood.

In this study, the researchers wanted to learn how verinurad and allopurinol work when taken together in different ways in healthy participants.

What was the purpose of this study?

The main questions the researchers wanted to answer in this study were:

- How did taking verinurad and allopurinol in different ways affect how much of each got into the participants' blood?
- What medical problems did the participants have during the study?

The answers to these questions are important to know before other studies can be done to find out if verinurad and allopurinol improve the health of people who have chronic kidney disease or heart failure.

What treatments did the participants take?

All of the participants took verinurad and allopurinol. They took different combinations of these drugs as 5 different treatments. They took some of the treatments after eating breakfast, and some without eating breakfast, which is known as "fasting". All of the participants took 1 dose each of the 5 treatments in different orders. They waited 5 days between taking each treatment.

This was an "open-label" study. This means the participants, researchers, study doctors, and other study staff knew what each participant was taking. A computer program was used to randomly choose the order each participant took their treatments in. This helps make sure the groups are chosen fairly. Researchers do this so that comparing the results of each treatment is as accurate as possible.

The chart below shows the treatments the researchers planned to study.

	Treatment 1	Treatment 2	Treatment 3	Treatment 4	Treatment 5
	• 1 capsule of verinurad • 1 tablet of allopurinol	• 1 combined capsule of verinurad and allopurinol	• 1 combined capsule of verinurad and allopurinol	• 1 capsule of verinurad • 1 tablet of allopurinol	• 1 capsule of verinurad only
	After fasting overnight	After fasting overnight	After eating breakfast	After eating breakfast	After fasting overnight
	The participants took 1 dose of each treatment and waited 5 days between each treatment				

What happened during this study?

The study started in April 2021 and ended in July 2021.

Before the participants took study treatment, they visited their study site 1 time. This part of the study lasted for up to 4 weeks. At this visit, the study doctors made sure the participants could join the study. They also:

- did a physical exam and asked about the participants' medications and any medical problems they were having
- took blood and urine samples
- checked the participants' heart health using an electrocardiogram, also known as an ECG
- tested the participants for COVID-19

The study doctors also did these tests and measurements at different visits throughout the study.

While the participants took study treatment, they stayed overnight at their study site for 30 days. The participants started taking their doses of study treatment on the third day and waited 5 days between taking each dose. They left their study site 3 days after the last dose.

After the participants took study treatment, they visited their study site 1 time. This part of the study lasted for up to 2 weeks. At this visit, the study doctors checked the health of the participants.

What were the results of this study?

This is a summary of the main results from this study overall. The results each participant had might be different and are not in this summary.

Researchers look at the results of many studies to decide which treatments work best and are safest. Other studies may provide new information or different results. Always talk to a doctor before making any treatment changes.

The websites listed at the end of this summary may have more information about the study results.

How did taking verinurad and allopurinol in different ways affect how much of each got into the participants' blood?

To answer this question, the study doctors took blood samples from the participants before and after they took each study treatment. The researchers measured the amounts of verinurad and allopurinol in the participants' blood.

After allopurinol gets broken down by the body, it is known as "oxypurinol". The researchers also measured the amount of oxypurinol in the participants' blood to get more information about how allopurinol acts in the body.

The researchers took 2 different types of measurements each for verinurad, allopurinol, and oxypurinol. These were:

- The average highest amount in the blood
- The average total amount in the blood over time

The researchers compared the results from Treatment 1 when the participants took a **separate** capsule and tablet with the results from Treatment 2 when the participants took a **combined** capsule. They took each of these treatments after fasting. For this question, the researchers looked at the results only from Treatments 1 and 2 because they only wanted to see if there was a difference between separate and combined capsules and tablets. The results for Treatments 3, 4, and 5 were used to answer other questions that are not in this summary because they were not part of the main question.

Overall, the researchers found that the **average highest amount** of:

- **verinurad** in the blood was **higher** when the participants took a combined capsule compared to when they took a separate capsule and tablet
- **allopurinol** in the blood was **similar** when the participants took a combined capsule and when they took a separate capsule and tablet
- **oxypurinol** in the blood was **lower** when the participants took a combined capsule compared to when they took a separate capsule and tablet

Overall, the researchers found that the **average total amount in the blood over time** of verinurad, allopurinol, and oxypurinol was **similar** when the participants took a combined capsule and when they took a separate capsule and tablet.

What medical problems happened during this study?

This section is a summary of the medical problems the participants had during the study that the study doctors thought might be related to the study drugs. These medical problems are called "adverse reactions". An adverse reaction is considered "serious" when it is life-threatening, causes lasting problems, or requires hospital care.

These adverse reactions may or may not be caused by the study drugs. A lot of research is needed to know whether a drug causes an adverse reaction. These adverse reactions have been, and will continue to be, reviewed together with all of the available data for verinurad and allopurinol.

The websites listed at the end of this summary may have other information about adverse reactions or other medical problems that happened during this study.

Did any adverse reactions happen during this study?

There were 28% of participants who had adverse reactions during the study. This was 7 out 25 participants.

Treatment	How many participants had an adverse reaction while taking each Treatment? (out of 25 participants)
While taking Treatment 1	12% (3)
While taking Treatment 2	4% (1)
While taking Treatment 3	4% (1)
While taking Treatment 4	12% (3)
While taking Treatment 5	4% (1)

None of the participants stopped taking study treatment because of adverse reactions they had during the study.

None of the participants had serious adverse reactions during the study.

What adverse reactions happened during this study?

The most common adverse reactions were dizziness and headache.

The table below shows the adverse reactions that happened during the study. Some participants may have had more than 1 adverse reaction.

Adverse reactions

Adverse reaction	**Total** (out of 25 participants)	**While taking Treatment 1** (out of 25 participants)	**While taking Treatment 2** (out of 25 participants)	**While taking Treatment 3** (out of 25 participants)	**While taking Treatment 4** (out of 25 participants)	**While taking Treatment 5** (out of 25 participants)
Dizziness	16% (4)	4% (1)	4% (1)	none	8% (2)	4% (1)
Headache	16% (4)	4% (1)	none	none	12% (3)	none
Stomach pain	8% (2)	4% (1)	none	4% (1)	none	none
Diarrhea	4% (1)	none	none	4% (1)	none	none
Numbness	4% (1)	none	none	4% (1)	none	none
Fatigue	4% (1)	none	none	none	4% (1)	none
Head discomfort	4% (1)	none	none	none	4% (1)	none

How has this study helped patients and researchers?

This study helped researchers learn more about how verinurad and allopurinol work when taken together in different ways in healthy participants.

Researchers look at the results of many studies to decide which treatments work best and are safest. This summary shows only the main results from this one study. Other studies may provide new information or different results.

Further clinical studies with verinurad and allopurinol are not planned.

Where can I learn more about this study?

You can find more information about this study on the websites listed below. If more information about the study results is available, it can also be found here.

- www.clinicaltrials.gov. Once you are on the website, type **"NCT04550234"** into the search box and click **"Search"**.
- www.clinicaltrialsregister.eu. Once you are on the website, click **"Home and Search"**, then type **"2020-002720-36"** in the search box and click **"Search"**.
- www.AstraZenecaClinicalTrials.com. Once you are on the website, type **"D5495C00014"** into the search box and click **"Find a Study"**.

Full Study Title: A Randomised, Single-dose, 5-period, 5-treatment, Crossover Study to Assess the Relative Bioavailability of 4 Different Formulations of Verinurad and Allopurinol in Healthy Subjects

AstraZeneca AB Protocol Number: D5495C00014

National Clinical Trials Number: NCT04550234

EudraCT Number: 2020-002720-36

AstraZeneca AB sponsored this study and has its headquarters in Södertälje, Sweden.

The phone number for the AstraZeneca Information Center is +1-877-240-9479.

Thank you!

Clinical study participants belong to a large community of people who take part in clinical research around the world. They help researchers answer important health questions and find medical treatments for patients.

CISCRP

The Center for Information & Study on Clinical Research Participation (CISCRP) is a non-profit organization focused on educating and informing the public about clinical research participation. CISCRP is not involved in recruiting participants for clinical studies, nor is it involved in conducting clinical studies.

CISCRP | One Liberty Square, Suite 1100 • Boston, MA 02109 | 1-877-MED-HERO | www.ciscrp.org

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