Clinical Study Results

AstraZeneca

Research Sponsor: AstraZeneca AB

Drug Studied: Verinurad and allopurinol

Study Title: A study to learn about the safety of verinurad taken with allopurinol in healthy Asian and Chinese participants

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Thank you!

Thank you to the participants who took part in the clinical study for the study drug verinurad.

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

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

What is happening with the study now?

The study started in January 2019 and ended in April 2019. The sponsor reviewed the data collected when the study ended and created a report of the results. This is a summary of that report.

This study included 22 participants in the United States.

Why was the research needed?

Researchers are looking for a better way to treat chronic kidney disease, also known as CKD. Before a drug can be approved for patients to take, researchers do clinical studies to find out how safe it is and how it works.

Verinurad is being developed as a treatment for CKD. Doctors already use allopurinol to treat kidney-related problems, as well as gout and having high levels of uric acid in the blood.

In this study, the researchers wanted to find out about the safety of verinurad when it was taken with allopurinol.

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

- Did the participants' safety results change during the study?
- 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 that help find out if verinurad taken with allopurinol improves the health of people with CKD.

The researchers asked for the help of healthy men and women of Chinese or Asian ancestry. Everyone in the study was between 27 and 48 years old when they joined.

What kind of study was this?

There were 2 groups in this study that participated at the same time.

Group 1 was “double-blind”. This means none of the participants or the researchers knew which treatment the participants took. Some studies are done this way because knowing what treatment the participants are taking can affect the results of the study. When the study ended, the research sponsor found out which treatment each participant took so they could create a report of the study results.

A computer program was used to randomly choose the treatment each participant took in Group 1. 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.

In Group 1, the participants took verinurad and allopurinol or they took a placebo to look like verinurad and a placebo to look like allopurinol. A placebo looks like a drug but does not have any medicine in it. Researchers use a placebo to help make sure any of the effects they see in the participants who take the drug are actually caused by the drug.

Group 2 was “open-label”. This means the researchers and the participants knew what the participants were taking. In Group 2, all of the participants took verinurad and allopurinol. The researchers had a special interest to look at safety in participants with Chinese ancestry. So, Group 2 had only participants of Chinese ancestry.

In this study, the participants took each of the treatments as a capsule by mouth. The doses were measured in milligrams, also known as mg. The chart below shows the treatments that were planned in the study.

Group 1 **13 Chinese and Asian participants**		**Group 2** **9 Chinese participants**
9 participants took: • 24mg of verinurad once a day for 7 days AND • 300mg of allopurinol once a day for 14 days	4 participants took: • A placebo that looked like verinurad once a day for 7 days AND • A placebo that looked like allopurinol once a day for 14 days	• 12mg of verinurad once a day for 8 days AND •300mg of allopurinol once a day for 15 days

What happened during the study?

Up to 29 days before the participants took study treatment, they visited their study site twice. At these visits, the study doctors checked the overall health of the participants to make sure that they could join the study. The study doctors:

- asked about the participants' health and about any medications they were taking
- did a physical exam
- took blood and urine samples
- checked the participants' heart health using an electrocardiogram, also called an ECG

The study doctors also did all these same tests and measurements throughout the study.

During the study, the participants in **Group 1** of the study visited their study site 1 time at the beginning. Later they stayed overnight at their study site for 9 nights. The chart below shows when the participants stayed at their study site and when they took the study treatments.

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Overnight stay						X	X	X	X	X	X	X	X	X	X
Verinurad or placebo								X	X	X	X	X	X	X	
Allopurinol or placebo	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

The participants in **Group 2** of the study visited their study site 1 time at the beginning. Later they stayed overnight at their study site for 11 nights. The chart below shows when the participants stayed at their study sites and when they took the study treatments.

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Overnight stay						X	X	X	X	X	X	X	X	X	X	X	X
Verinurad								X		X	X	X	X	X	X	X	
Allopurinol	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	

Up to 14 days after the participants finished taking study treatment, they visited their study site again. The study doctors checked the participants' health and asked about any medical problems they were having.

What were the results of the 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 change.

The websites listed at the end of this summary may have a full report of the study results.

There was 1 participant who left the study in the first 7 days before any participant got verinurad or the placebo. So, the results below are for 21 participants from both Group 1 and Group 2.

Did the participants' safety results change during the study?

To answer this question, the doctors did tests and measurements before and after the participants took study treatment. Overall, the researchers found that there were some small changes in the results of these tests and measurements. But, the researchers did not consider these to be significant.

The doctors also kept track of the "adverse events" that the participants had. An adverse event is any sign or symptom that participants have during the study. Adverse events are considered "serious" when they are life-threatening, cause lasting problems, or require hospital care. Adverse events may or may not be caused by the study treatments.

Number of participants who had adverse events

There were 38.1% of participants who had adverse events during the study. This was 8 out of 21 participants.

- 22.2% of participants had adverse events after taking verinurad with allopurinol in Group 1 of the study. This was 2 out of 9 participants.
- 33.3% of participants had adverse events after taking a placebo in Group 1 of the study. This was 1 out of 3 participants.
- 55.6% of participants had adverse events after taking verinurad with allopurinol in Group 2 of the study. This was 5 out of 9 participants.

None of participants had serious adverse events during the study. There were no deaths and none of the participants stopped taking study treatment because of adverse events.

Adverse events

The only adverse event that happened in more than 1 participant was diarrhea. The table below shows the adverse events that happened during the study. Some participants had more than 1 adverse event.

Adverse event	Group 1: verinurad with allopurinol (out of 9 participants)	Group 1: placebo (out of 3 participants)	Group 2: verinurad with allopurinol (out of 9 participants)
Diarrhea	22.2% (2)	0.0% (0)	0.0% (0)
Allergic skin reaction	11.1% (1)	0.0% (0)	0.0% (0)
Itchiness	11.1% (1)	0.0% (0)	0.0% (0)
Headache	0.0% (0)	33.3% (1)	0.0% (0)
Constipation	0.0% (0)	0.0% (0)	11.1% (1)
Cough	0.0% (0)	0.0% (0)	11.1% (1)
Dizziness	0.0% (0)	0.0% (0)	11.1% (1)
Dry throat	0.0% (0)	0.0% (0)	11.1% (1)
Lip blister	0.0% (0)	0.0% (0)	11.1% (1)
Mouth ulcer	0.0% (0)	0.0% (0)	11.1% (1)
Stomach pain	0.0% (0)	0.0% (0)	11.1% (1)
Stuffy nose	0.0% (0)	0.0% (0)	11.1% (1)
Swollen blood vessels in the anus, also known as hemorrhoids	0.0% (0)	0.0% (0)	11.1% (1)
Throat irritation	0.0% (0)	0.0% (0)	11.1% (1)

What medical problems did the participants have during the 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 treatments. 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 treatments. A lot of research is needed to know whether a treatment causes an adverse reaction.

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.

Some of the adverse reactions listed below are also included in the list of adverse events earlier in this summary.

How many participants had serious adverse reactions?

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

How many participants had adverse reactions?

There were 33.3% of participants who had adverse reactions during the study. This was 7 out of 21 participants.

- 22.2% of participants had adverse reactions after taking verinurad with allopurinol in Group 1 of the study. This was 2 out of 9 participants.
- 33.3% of participants had adverse reactions after taking a placebo in Group 1 of the study. This was 1 out of 3 participants.
- 44.4% of participants had adverse reactions after taking verinurad with allopurinol in Group 2 of the study. This was 4 out of 9 participants.

There was 1 participant who stopped taking study treatment because of adverse reactions during the study. This happened in the first 7 days of the study before any participant took verinurad or the placebo. This participant was taking the placebo in Group 1 of the study.

What adverse reactions did the participants have?

The most common adverse reaction that happened in more than 1 participant was diarrhea.

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

Adverse reactions during the study

Adverse reaction	Group 1: verinurad with allopurinol (out of 9 participants)	Group 1: placebo (out of 3 participants)	Group 2: verinurad with allopurinol (out of 9 participants)
Diarrhea	22.2% (2)	0.0% (0)	0.0% (0)
Itchiness	11.1% (1)	0.0% (0)	0.0% (0)
Headache	0.0% (0)	33.3% (1)	0.0% (0)
Constipation	0.0% (0)	0.0% (0)	11.1% (1)
Dizziness	0.0% (0)	0.0% (0)	11.1% (1)
Dry throat	0.0% (0)	0.0% (0)	11.1% (1)
Lip blister	0.0% (0)	0.0% (0)	11.1% (1)
Stomach pain	0.0% (0)	0.0% (0)	11.1% (1)
Throat irritation	0.0% (0)	0.0% (0)	11.1% (1)

How has this study helped patients and researchers?

This study helped researchers learn more about the safety of verinurad taken with allopurinol in healthy Asian and Chinese 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 are planned.

Where can I learn more about this study?

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

- www.clinicaltrials.gov. Once you are on the website, type **"NCT03836599"** into the search box, and click **"Search"**.
- www.AstraZenecaClinicalTrials.com. Once you are on the website, type **"D5495C00006"** into the search box, and click **"Find a Study"**.

Full Trial Title:A Phase I Randomized Double-blind Placebo-controlled Study with 2 Separate Cohorts to Assess the Safety, Tolerability and Pharmacokinetics of Verinurad and Allopurinol in Healthy Asian and Chinese Subjects

National Clinical Trials Number: NCT03836599

AstraZeneca Protocol Number: D5495C00006

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

The phone number for the AstraZeneca Information Center is

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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.