New medicine for actinic keratosis:
Comparing effect of active drug with dummy drug

What is this summary about?
This summary is written to inform the public in plain language about the results of a clinical study.

A clinical study is research done on people. Such research is designed to answer questions about diseases, treatments, or other factors that can affect our health.

The results of a clinical study are described in a detailed report for researchers, health care professionals, and authorities who approve medicines. This is a short summary of that report.

Do not just look at this summary
The results shown here are from a single study. Many studies are needed to find out if a medicine works and is safe to use.

Do not change your current medical treatment based on the results shown in this summary. Always consult your doctor.

If you would like to find more detailed information about this clinical study, please look at the table at the end of this summary.

IN SHORT
Why was this study done?
To test a new treatment for people with actinic keratosis - a common disease in sun-damaged skin.

What was tested?
The study treatment – a gel medicine used on the sun-damaged skin – was compared with a dummy gel.

Who took part?
305 adult men and women with actinic keratosis.

What did the study show?
Most of the participants who had the study treatment had improvement in their actinic keratosis.

Few of the participants who had dummy gel had improvement in their actinic keratosis.

The study treatment had side effects. The most common side effects were pain and itch in the area where the study treatment had been put on the skin.

1. When and where was this study done?
The study started in November 2015 and ended in November 2017. It took place in 4 countries:
- United States, United Kingdom, France, Spain

2. What disease was studied?
The participants in this study had actinic keratosis – a common disease that affects 11 to 25 out of 100 people. Actinic keratosis is a disease in the skin and it shows up as thickened and scaly lesions. It normally develops on areas of the skin that are often out in the sun, for example face, ears, scalp, neck, forearms, and the back of the hands.
If the disease is not treated it may develop into a form of skin cancer called squamous cell carcinoma.

Right now, there are treatments available for those actinic keratosis lesions which are visible. But better medicines for treatment of larger areas of the skin are needed to lower the risk of evolving actinic keratosis lesions.

3. Why was this study done?
Researchers wanted to test if a new gel treatment for actinic keratosis worked better than dummy drug.

4. Who took part in this study?
305 people were treated with study treatment or dummy gel: 200 men and 105 women, all between 40 and 94 years old. The participants had between 5 and 35 actinic keratoses in the treatment area of sun damaged skin, either on the face or on the chest. Most of the participants had the treatment area on their face.

33 of the participants were from an EU country (France or Spain):
- US: 246 participants
- UK: 28 participants
- France: 26 participants
- Spain: 7 participants

5. What treatments were studied?
2 gel treatments were compared:
- Ingenol disoxate gel, called 'study treatment' in this summary
- a dummy gel

A dummy gel looks and feels like the real gel but does not have any medical ingredients. New treatments are often compared with a dummy treatment in clinical studies.

The study treatment was compared with the dummy gel to check:
- If the dummy gel helped improve the actinic keratosis
- if the study treatment improved the actinic keratosis more than the dummy gel did
- if the study treatment was well tolerated and safe to use

6. How was the study done?
2 out of 3 participants were treated on the skin with the study treatment, and the other 1 of 3 with the dummy gel. It was decided by chance which treatment each participant received.

The participants and the study doctor did not know which treatment the study participants received.

Each study participant was treated 3 days in a row with either study treatment or dummy gel. They were followed up for 8 weeks after their first treatment to see if their actinic keratosis lesions had improved. The study doctor also looked for any side effects of the treatment. The participants were then followed for 12 months more to see if there were long term results of the treatment.

7. What did the study show?
The actinic keratosis improved for more of the participants who were treated with study treatment than it did for those who were treated with the dummy gel.

Participants with no visible actinic keratoses on the treated skin 8 weeks after treatment
This was the main result of the study. More results are included in a detailed report for researchers. The table at the end of this summary shows where to find this report.

8. What were the side effects?

The graph and text below show the side effects that the study doctors believed were caused by the treatments.

During the first 8 weeks of the study, more participants who were treated with study treatment had side effects than did those treated with dummy gel.

**Participants with side effects during the first 8 weeks**

![Graph showing side effects during first 8 weeks]

One participant, who was treated with study treatment, had side effects that were rated as serious because the participant had to go to the hospital. This was a result of high fever, jaundice, abnormal liver function, dehydration, a low number of cells in the blood, and deficiency of sodium in the blood. The participant was discharged from the hospital after 2 days and was fully recovered after 2 weeks. The study doctor thought the serious side effect might have been caused by the study treatment or by the participant's other health problem, such as an infection.

**Most common side effects**

More than half of the side effects (64%) were reactions in the skin area that had been treated. The most common side effects were:

- A burning sensation in the area where the study treatment had been used
- Itchy skin and pain in the area where the study treatment had been used

Local skin responses like redness of the skin, flaking and scaling, crusting, blistering and damage of the skin was brief and most often peaked the day after the last treatment. On average the local skin response declined to mild levels after 2 weeks and was gone within 4 weeks.

After the first 8 weeks, the participants we followed for another 12 months. In this period fewer participants who were treated with study treatment had side effects than those who were treated with the dummy gel. None had serious side effects.

**Participants with side effects after the first 8 weeks**

![Graph showing side effects after first 8 weeks]

**Leaving the study because of side effects**

One participant, who got the study treatment, left the study before the end because of a side effect of abnormal tiredness.

9. How will this study help patients and researchers?

This summary only shows the results of this one study. Other studies may show different results.

The development of the study treatment for actinic keratosis has been stopped and the study treatment will therefore not become available to patients.

**Are there plans for further studies?**

The study treatment was also investigated in a similar study called LP0084-1194 and for use on the scalp in 2 studies called LP0084-1195 and LP0084-1196. There are no plans for other studies.
10. Where can I find more information about the study

You can find more information about this study in other places, as shown in the table below. A clinical study has a unique identifier (ID) in databases and publications. Please use the relevant ID, if necessary, when you search for more information.

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Company responsible for this study: LEO Pharma A/S
Please email any enquiries to: disclosure@leo-pharma.com

Study name: Efficacy and safety of LEO 43204 in field treatment of actinic keratosis on face or chest including 12-month follow-up