

NATURAL MEDICINES NEWSLETTER

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Podcast

Take Home Points

Setting Considerations

Counseling Points

Legal Points

Take CE

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Question: What is the mechanism by which the homeopathic medicine, *Oscillococcinum (Anas barbariae hepatis et cordis extractum 200CK HPUS)* is proposed to prevent or treat influenza (flu) viral infections?

Answer: Part 2 of a 2 part series. The safety and efficacy of the homeopathic medicine, *Oscillococcinum* for the prevention and treatment of regular influenza A viral infections as well as its use in the treatment of swine-origin influenza A (H1N1) viral infections were reviewed in part 1.¹ *Oscillococcinum* is a patented homeopathic product available over the counter (OTC) and on the internet.² Due to the emergence of both the avian bird flu (H5N1) strains and the recent swine-origin influenza A (H1N1) viral infections across the world as well as the concern over the availability of adequate supplies of antivirals to prevent and treat them has resulted in some non-medical authorities recommending the use of *Oscillococcinum*. What is *Oscillococcinum* and how is it made?

It has been asserted that the active ingredient in *Oscillococcinum* is *Anas barbariae hepatis et cordis extractum 200CK HPUS*.² This ingredient is essentially a sample taken from wild duck heart and liver. Wild duck heart and liver can serve as reservoirs for the influenza virus. The philosophy for the use of this homeopathic medicine is to "let like be cured by like." Once this sample is taken from these organs, it will undergo a preparation process called Korsakov potentiation. An extract from the sample of the wild duck heart and liver is placed in a test tube; it is then shaken and poured off leaving behind some residue on the side of the test tube. A hydroalcoholic solution is then added to the test tube to dilute the drops left behind from the original sample. The test tube is shaken again and then poured off leaving behind only a few drops in the test tube. This process of dilution is repeated a total of 200 times. This is why the "200CK" is included in the name of the ingredient.² The "HPUS" in the name of the active ingredient stands for Homeopathic Pharmacopeia of the United States. We are not aware of any published, reputable scientific evidence that the final dilution used to make the granules for sublingual administration even has a single molecule of the stated active ingredient. In addition, it is not known how much, if any, is absorbed sublingually. If the saliva containing the dissolved active ingredient (such as a protein fragment from the original sample) is swallowed, it is also not known if it would remain structurally intact once exposed to the gastric acid in the stomach. As a result of this extensive dilution process, which leads to questions regarding the presence of a single molecule of the original sample, it is no surprise that there are no major side effects. In addition, this may explain the lack of efficacy as a preventive therapy as well as its questionable efficacy as an agent that shortens the duration of the regular flu infection. How, then, does this homeopathic medication work to prevent and/or treat the influenza A virus infection?

Unfortunately, it is not known if it is purely a placebo effect or if it is actually the result of a biologic response that confers some type of immunity against the flu. It is plausible, given the low quality and limited number of full text publications in peer reviewed scientific journals, that the demonstrated benefit on duration of symptoms is either a placebo effect or the effect of some other variable not related to the use of *Oscillococcinum*. Additional well-designed, fully published studies are needed in order to determine this. The philosophy of "using like to treat like" is also an accepted practice by allopathic and osteopathic medicine. This approach is the basis for allergy shots as well as vaccines currently on the market.

However, the difference lies in the route of administration as well as the potency or presence of the actual substance. Products that utilize this approach within allopathic and osteopathic medicine have verified quantities of what is being administered to the patient. In addition, they are also supported by well designed clinical trial evidence and are published in peer-reviewed scientific journals. As it relates to the flu vaccine (traditionally given by intramuscular injection), this product and route of administration has demonstrated the ability to generate an immune response that results in the production of antibodies against those specific antigens. If the highly diluted *Anas barbariae hepatis et cordis extractum* found in granules actually make it into the sublingual circulation or intestine structurally intact, it is plausible that it could generate an immune response. However, as stated above, in the absence of evidence it is unknown if this even occurs and to what extent immunity or protection is provided.

While there is no available evidence regarding the ability of Oscillococcinum to confer any immunity or protection against the flu or to treat an active infection, as clinicians, knowing this is still of importance to clinical practice. Therefore, until well designed clinical trials are undertaken and the results available in full-text peer reviewed medical journals, there is no convincing evidence that Oscillococcinum is effective for the prevention or treatment of any strains of the regular flu virus, avian bird flu or recent swine-origin (H1N1) flu.

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Take Home Points:

- Oscillococcinum is a patented homeopathic medicine with the reported active ingredient, *Anas barbariae hepatis et cordis extractum* 200CK HPUS which comes from a sample taken from wild duck heart and liver which can harbor influenza virus.
- It is manufactured by taking an extract from the sample of wild duck heart and liver and putting it through a dilution process called Korsakov potentisation. The initial extract is shaken in a test tube and then poured out. The remaining drops are then diluted with a hydroalcoholic solution and placed into the same test tube where and is then poured out. This process of dilution is repeated 200 times before the final sample is used to make the granules used for sublingual administration.
- The mechanism of action of Oscillococcinum is not known. Given the number of dilutions completed during its manufacturing process, it is questionable that any active ingredient is being absorbed.

Considerations for Clinicians Based on Setting:

Outpatient Setting:

Since Oscillococcinum can be purchased over the counter and on the internet, it would be important for all clinicians to know that this homeopathic treatment is not only being advocated by some non-medical or non-scientific authorities, but patients may inquire about its safety and efficacy should the current or future influenza infections get worse. It would also be important for clinicians to assess the personal beliefs and desires of their patients regarding various treatment options so that treatment plans can be adjusted accordingly.

Inpatient Setting:

The above information from the outpatient setting is also applicable, especially if a patient is discharged from the hospital on standard treatment which is known to be effective and recommended by medical authorities for the prophylaxis and/or treatment of the swine-origin influenza A (H1N1) virus. Adherence to this regimen could be influenced by the patients underlying knowledge of various treatment options and/or personal beliefs regarding the use of prescription medications.

Important Counseling Bullet Point(s):

- It would be most important for clinicians to counsel their patients about the lack of objective and well designed clinical trials evaluating the safety and efficacy of Oscillococcinum for regular influenza illness as well as the prevention or treatment of swine-origin influenza A (H1N1) viral infections. In addition, patients should be advised to immediately begin and complete treatment regimens prescribed to them not only for their own health but for the health of those in their communities.

Medical/Legal Consideration(s):

- There were no cases identified in the 2008 edition of LexisNexis' *Drugs in Litigation* regarding Oscillocoquinum or products liability claims against the drug manufacturer, and *Pharmacology Weekly's* legal counsel has not identified any such cases to date.⁴ Nevertheless, several peer-reviewed scientific publications have shown that there is no definitive evidence for the use of Oscillocoquinum in the prevention and/or treatment of influenza illness (and more specifically the swine-origin influenza A (H1N1) viral infection). It would be prudent to document in the medical chart that an inquiring patient has been advised that the use of this homeopathic treatment is not currently recommended as a substitute to currently recommended options such as oseltamivir and zanamivir.

Test Questions for CE:

What does the 200CK in the name of the active ingredient of Oscillocoquinum refer to?

- a. The number of dilutions made to the original extract
- b. The number on the pill
- c. The temperature used to make the active ingredient
- d. The lot number of the product

What does the HPUS in the name of the active ingredient of Oscillocoquinum refer to?

- a. Health Potentiation in the United States
- b. Homeopathic Prophylaxis in Flu Symptoms
- c. Homeopathic Pharmacopeia of the United States
- d. Health Protection in the United States

Which of the following best describes the mechanism of action described by scientific literature for Oscillocoquinum in the treatment of the flu?

- a. It activates T lymphocytes
- b. It activates B lymphocytes
- c. Decreases viral replication
- d. The mechanism of action is not known

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