Saskatchewan Drug Information Services
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COLD SORES

Becky, a 35 year old woman, presents at your pharmacy with complaints of tingling at the corner of her mouth. She keeps touching the spot indicating that she can "feel a cold sore coming on". She complains that this is the tenth cold sore that she has had this year and that a large outbreak ruined a recent trip to Mexico. She has used Lipactin®, Zilactin® and various home remedies in the past. She has also used Zovirax® (acyclovir) ointment. Becky didn't think any of these treatments worked very well and asks you to recommend something.

Q: What is the herpes simplex virus?
Herpes simplex viruses, HSV-1 and HSV-2 are double stranded DNA viruses.[1] HSV-1 typically causes herpes labialis or cold sores; HSV–2 commonly causes genital herpes.[1]

Q: What happens in primary HSV-1 infection?
Primary HSV-1 infection often occurs during childhood.[2] It may be asymptomatic or progress to generalized lymphadenopathy, fever, malaise and gingivostomatitis (inflamed gum tissue and oral mucosa).[1,3] Multiple vesicles are formed and take seven to twenty-one days to heal.[3] HSV-1 is transmitted through direct human to human contact with lesions, saliva or respiratory droplets.[4] Primary infections are associated with the greatest amount of viral shedding.[2,4] but transmission is possible during the asymptomatic as well as the symptomatic periods.[1] After the primary infection, the virus lies dormant in the neural ganglia and awaits a "trigger" for reactivation. Triggers include sun exposure, illness, stress or onset of menses.[1-4]

Q: Are recurrent HSV-1 infections as severe as primary HSV-1 infections?
Recurrent infections, characterized as cold sores, occur at the same site but are generally milder and shorter in duration.[5] They typically heal within seven to ten days.[3] Recurrent lesions are classified as classical or non-classical.[2] A classical lesion is preceded by a "prodrome" or a burning, tingling sensation at the future site of the lesion.[2] This prodrome may precede vesicle formation by two to twenty- four hours.[2] A non-classical lesion lacks prodromal symptoms.[2]

Q: What should I tell my patients about treatment?
HSV-1 is self-limiting and lesions will heal without treatment.[1] Most patients, however, want a product which will halt lesion formation and/or speed healing time.[1] Product selection is dependent on the stage of infection. (Table 1) If antivirals are used, they should be initiated during the prodromal phase, not after a lesion is present.[5] For patients presenting with a lesion, pharmacists should address pain control and prevention of lesion dryness and cracking.[3] Patients should understand that treatment will help minimize symptoms but will not decrease healing time. Topical

moisturizers (e.g., petrolatum) to prevent drying and cracking of the lesion, topical anesthetics (e.g., benzocaine, lidocaine) for relief of pain and itching, and OTC oral analgesics for pain are recommended.[3] Topical anesthetics are very short-acting and can cause sensitization. Counterirritants (camphor >3% and menthol >1%) and astringents can cause excessive drying and increase irritation.[3] Corticosteroid use is not recommended due to potential immunosuppresion.[3] Lipactin®, a commonly recommended OTC product, contains heparin sodium and zinc sulfate. Some studies have shown that zinc sulfate accumulates in the virion and inhibits virion glycoprotein functions.[6] Heparin blocks HSV-1 attachment to cells *in vitro*.[7] These *in vitro* processes have not been well substantiated by clinical trials.

Table 1: Product Selection for HSV-1

QUESTION/OBSERVATION	TREATMENT
Is a lesion present?	Moisturizers
Principal complaint- pain/appearance?	Analgesics/anaesthetics
Prodromal symptoms?	Antivirals
Number of recurrences per year (>6)?	Antivirals
Lifestyle? Modifiable triggers?	Education

Q: Is there anything my patients can do to prevent a recurrent infection?
Prophylactic measures against recurrent infections should be addressed. Proper diet and sleep hygiene can reduce stress triggers. Patients should avoid touching the lesion to reduce its potential spread and should wash hands frequently.[3] Diligent use of lip balm or sunscreen with SPF 30 around the lip area can also prevent recurrence.[3]

Q: When do patients start on prescription drugs?
Prescription therapy with antivirals has been reserved for patients with more than six recurrences per year and is more effective if started at the first sign of prodrome.[2] Until recently, only topical acyclovir was officially indicated for the treatment of cold sores in patients with normal immune systems. Acyclovir has poor penetration through the skin and trials of acyclovir ointment have not shown any benefit.[2,8] Recent studies[9] with acyclovir cream suggest that frequent application is necessary to compensate for poor skin penetration.[2] Acyclovir 5% cream should be initiated within one hour of the first sign of a recurrent episode and applied five times daily for 4 days.[9]

Q: What oral antiviral was recently received approval for the treatment of herpes labialis?
Health Canada recently approved Valtrex® (valacyclovir) 2 grams twice daily for one day for treatment of cold sores.[10] Studies have shown that one day valacyclovir treatment started within 2 hours of onset reduces healing time, duration of pain and/or discomfort and duration of an episode by one day.[10] Comparative efficacy trials of oral antivirals or of oral antivirals versus topical antivirals are not available.

Q: What counseling could be provided to Becky regarding her cold sores?

As Becky is presenting in the prodromal stage and has had more than six recurrences this year, she may be a candidate for oral antiviral therapy. She could be redirected to her physician or a clinic to ask for a prescription and begin therapy immediately. At this opportunity one would want to inquire about sunscreen use in Mexico, reiterate the importance of hand washing, avoidance of touching the area or sharing towels or drinking glasses and identify any triggers. If possible, triggers should be avoided or minimized. Suggest Becky ask her physician for a prescription to be kept on file or available at home for self-treatment at the first onset of prodromal symptoms. Becky should be counseled that if a lesion does develop, healing may not be improved by antiviral treatment and that symptomatic treatment with moisturizers and analgesics may be equally effective and less costly.

Prepared by Beth Bachman, Pharmacy Student and Zahra Hirji, Drug Information Consultant
References available at www.usask.ca/druginfo or upon request

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STAFF CHANGES AT SDIS

We are pleased to introduce Carmen Bell, the new drug information consultant on the healthcare professional line. Carmen is a Saskatchewan graduate with experience in community pharmacy. She is keenly interested in the field of drug information and looking forward to researching your questions.

Zahra Hirji has resigned from SDIS effective July, 2004. She and Ted Carino, also a Saskatchewan pharmacy graduate, were married this summer and will make their home in Victoria, BC. Best wishes to Zahra and Ted!!

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Suspect an adverse reaction?

REPORT IT……………..FOR THE BENEFIT OF ALL!

Has one of your patients experienced an adverse reaction to a drug or other health product recently? If so, did you report it to Health Canada's Canadian Adverse Drug Reaction Monitoring Program?

Individual reports may be the only source of information concerning previously undetected adverse reactions or changes in product safety and effectiveness profiles.

Reporting is Easy!

A one-page report form can be found in the CPS, in the SPDP Formulary, on the Health Canada website (www.hc-sc.gc.ca/hpfb-dgpsa/tpd-dpt/adverse_e.pdf), or on request from the SaskAR Regional Centre.

Reports can be submitted:

*By **telephone**: 1-866-234-2345*
*By **fax**: 1-866-678-6789*
*By **mail**: Saskatchewan Regional Adverse Reaction Centre (SaskAR)*
College of Pharmacy & Nutrition, University of Saskatchewan
110 Science Place
Saskatoon SK S7N 5C9

We would like to express our sincere appreciation to the following pharmacies and pharmacists for their donations to SDIS in 2003 – 2004:

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Personal contributions: Ron Noyes, Arlene Kuntz