

Self-treatment of a basal cell carcinoma with “black and yellow salve”

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Patients may seek “alternative” or “non-traditional” therapies for dermatologic problems, frequently in search of a miraculous cure. However, many of these medicaments contain unknown compounds with questionable benefit and a potential for significant harm. We describe a patient who developed a large ulceration on her nose after applying “black and yellow salves” obtained from Mexico in an attempt to self-treat a basal cell carcinoma. (*J Am Acad Dermatol* 2005;53:509-11.)

CASE REPORT

A 65-year-old female patient with a history of multiple basal cell carcinomas, treated in the past with Mohs micrographic surgery, standard simple excisions, and electrodesiccation and curettage, presented with a new 3-mm pearly papule on her right nasal sidewall. Subsequent biopsy revealed a micronodular basal cell carcinoma. The patient was scheduled for Mohs surgery. Before her surgical date, the patient received two salves from a friend in Mexico. The patient applied the “black salve” to her tumor site once a day for two consecutive days under occlusion with a bandage. On the third day, she applied the “yellow salve.” The patient repeated this procedure once and then discontinued use because of pain and tenderness. The patient then covered her wound daily with a bandage. On her return to the clinic approximately 2 weeks later, she had a 12-mm round ulceration with eschar formation on her right nasal sidewall (Fig 1). Oral antibiotics were prescribed and the ulcer was treated with local moist occlusive wound care. Figure 2 shows the result of secondary intention healing 6 months later. The patient is examined regularly and Mohs surgery is planned for any local recurrence.



Fig 1. Right nasal sidewall after repeated applications of black and yellow salves.



Fig 2. Right nasal sidewall 6 months after secondary intention healing.

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RESULTS

Chemical analysis of the salve samples was performed using the following methods: headspace gas chromatography-mass spectrometry (GC-MS); organic extractions followed by GC-MS; and scanning electron microscopy (SEM) with energy dispersive X-ray analysis (EDXA). The black salve (so-called “cancer salve”) was comprised of zinc chloride and the chemicals sanguinarine, protopine,

Table I. Partial list of identified chemical compounds

Black salve	Yellow salve
Benzoic acid	beta-Terpinene
Alpha-Terpineol	Sabinene
p-Tolualdehyde	Cyclohexane, 1-ethyl
Benzofuran, 2,3-dihydro-	p-Cymene
2-Furancarboxaldehyde, 5-hydroxymethyl-	Benzyl alcohol
Benzaldehyde, 4-hydroxy	Borneols
Vanillin	alpha-Terpinene
Tropolone	Linalool
Benzothiazole, 2-(methylthio)-	p-Menth-3-en-1-ol
Alkylpyrrolidines	Camphor
(3H)-Isobenzofuranone, 6,7-dimethoxy	Citronella
nor-Chelerythrine	Terpinen-4-ol
Demethylchelerythrine	Methyl salicylate
Assorted alkane, alkene, and aromatic	beta-Citronellol
Hydrocarbons, ketones, acids, esters and aldehydes	trans-Geraniol
	2-Cyclohexen-1-one, alkyl-
	Ethyl salicylate
	Safrole
	1,4-Hexadiene, 3-ethyl
	Eugenol
	Alkyl tricyclodecenes
	Junipene
	Alpha-Cedrene
	Thujopsene
	Benzyl ether

chelerythrene, and homochelidonine, a characteristic of the bloodroot plant, *Sanguinaria*. The yellow salve (so-called "healing salve") contained linseed oil, beeswax, rosin, lavender spike oil, and the volatile organic compounds pinene, eucalyptol, limonene, terpineol, and cineole. Additional chemicals identified in the black and yellow salves are listed in Table I.

DISCUSSION

The use of the black and yellow salves is not uncommon. We are aware of other patients who have used them to treat suspected skin cancers. We have seen various instructions for its use, but a typical example can be seen in Figure 3. Figure 4 shows the salves used by this patient.

In 1941, Frederic E. Mohs published his original article on chemosurgery, which described his technique for the in situ chemical fixation of skin cancers, serial excision of horizontal layers, immediate microscopic tumor mapping, and examination of the

superficial and deep margins. The chemical fixative for this procedure was zinc chloride. Other components of the fixative paste included stibnite, a granular antimony ore, for the matrix, and *Sanguinaria canadensis*, or bloodroot powder.^{1,2} The preparation is not difficult to make and is still in use. Therefore, it is not surprising that it has found a place in alternative medicine.

Alternative or unconventional therapies have been used since the beginning of recorded history.³ Many of our conventional therapies are derived from these so-called alternative medicines. Even with increasing technology, a refinement of research techniques, and the development of evidence-based medicine, many individuals seek alternative choices in all aspects of medicine. There are many reasons why patients turn to alternative medicine. Astin⁴ reported that users of alternative medicine were in general better educated, reported poorer health status, and found the health care alternatives to be congruent with their own values, beliefs, and philosophical orientations toward health and life.

Although the patient reported in this article regarded her numerous prior skin cancer surgeries as successful, she stated that she was seeking a new, painless alternative. Her friend from Mexico was satisfied and pleased with his own results, offering the salves as inexpensive and pain-free therapy. It is important to note that despite the large necrotic ulcer and prolonged healing time, this patient considered her treatment a "success."

New therapies of potential benefit should be evaluated in controlled studies. Most physicians are aware of the danger posed by contaminants in orally ingested products like vitamin supplements and herbal remedies. Unlabeled topical preparations like these black and yellow salves may be produced with poor quality control and contain a wide array of potentially harmful chemical constituents. The known adverse local effects of zinc chloride application include pain, skin necrosis, prolonged healing time, and scarring. The local tissue effects of many of the other ingredients remain unknown and uninvestigated. Furthermore, the systemic toxicity of both the primary ingredients and any contaminant chemicals is unknown, but might be real in patients with uncontrolled use. Fortunately, this patient now appears to be clinically tumor free and without systemic side effects. We continue to follow her closely for local recurrence, given the lack of histologic confirmation of tumor extirpation.

As more patients turn toward alternative therapies, dermatologists should become better informed about the potential uses and misuses of products available. Well-controlled outcome studies

INSTRUCTIONS FOR REMOVING CANCER

TO TEST FOR CANCER: Apply a small amount to the suspected area (not over 1/8 inch thick), and cover with a Band-Aid and press lightly and then leave for 30 minutes. Strange sensations may be experienced during this time...remove the Band-Aid and if the salve remains on the skin, there is cancer in that immediate area, if the salve remains on the Band-Aid, there is no cancer in that area. This salve will only react on cancer.

TO REMOVE CANCER:

DARK SALVE... Apply 1/8 inch thick over the cancer and cover with gauze or a large Band-Aid. A small skin cancer might be smaller than a dime while a large cancer might be larger than a half-dollar. Leave this salve on for 24 hours and then remove and thoroughly clean and dry the area and then apply:

YELLOW SALVE... During the next five days, this salve will be kept in contact with the area being treated. It may be necessary to clean and replace the salve several times a day as the cancer will enter into a stage of running or oozing pus sometimes mixed with blood and this is to be expected.

On the 6th day re-apply the DARK SALVE for 24 hours and then use the YELLOW SALVE as directed. Continue to repeat this process until there is no reaction...sometimes there may be more than one core that is formed...be sure and remove all of the cancer.

This treatment will make a bad looking sore and there will be pus sometimes with blood that forms around the core of the cancer. There will be much redness around the cancer while it is working and there may be considerable swelling and also a lot of pain may be experienced while the roots are being killed. This indicates that the cancer has reached an advanced stage, so be brave and thank the Lord that your life is being spared by these two salves.

Fig 3. Instructions that accompanied the black and yellow salves (courtesy of David Greeson, MD).

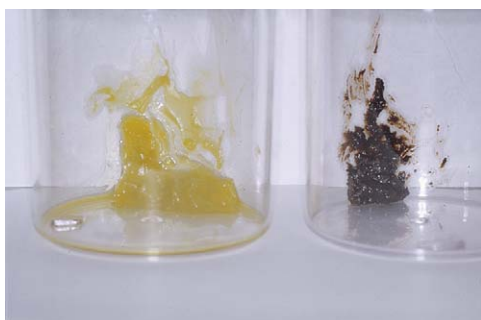


Fig 4. The black and yellow salves.

are clearly needed for many of these new alternative therapies.

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