



RESEARCH ARTICLE

Kambô: A Shamanistic Ritual Arriving in the West - Description, Risks and Perception by the Users

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Abstract

The impact of priests and their institutions is vanishing in our culture. This depletes the society from religious experiences. However, many are looking into new ways of experiencing the essence of life. One of the new sources inspiring people to reconnect with themselves and with nature can be found in shamanism. Since some decades now rituals from the Amazon based on herbal products such as Ayahuasca are increasingly seen in Europe and the United States.

Recently, people started to experiment with Kambô, a skin secretion from an Amazonian giant leaf frog, containing a number of neuroactive and vasoactive peptides, such as phyllocaerulein, phyllokinin, sauvagine, adenoregulin, deltorphins, and dermorphin. From a pharmacological and medical perspective, the Kambô ritual is based on voluntary inducing a mostly relative brief period of intoxication, from a shamanistic perspective it is about a medicine which brings healing and classically prepares tribe members for more efficient hunting. There are even reports from patients claiming to be cured of cancer.

We will present both some medical as well as shamanic and transpersonal perspectives related to this ritual, discuss adverse events, interactions and contra-indications and add some recommendations for its use.

Keywords

Transpersonal, Frog, Toad, Shamanism, Adverse events, Psychedelic, Entheogen

Introduction

Since the milestone work of the father of ethnobotany, professor Richard Evans Schultes (1915-2001) was published, rituals based on psychedelic compounds found in certain plants, such as Ayahuasca (a brew based

on Banisteriopsiscaapi and Psychotriavidis), peyote and magic mushrooms have been introduced in the West [1]. But not only concoctions based on plants are used in ritualistic settings, secretions of animals are also in use, such as the toad skin of Bufo Alvarius, containing the psychedelic compound 5-Methoxy-N,N-dimethyltryptamine [2]. Such use is often followed by mystical and transpersonal experiences such as ineffability, timelessness, awe and amazement, and experiences of pure being, enhanced awareness and egolessness [3].

The secretion of the skin of a certain Amazonian frog, Phyllomedusa bicolor, is a preparation becoming increasingly popular in various ritual settings in the West, intended to heal and transform the user. In contrast to the toad skin, it does however not contain any psychedelic compounds. Kambô is the name for this secretion of the frog's skin, which is also known under a variety of names, such as 'campu', 'Acaté', 'sapo' and 'vacino da floresta'. Traditionally the dried secretion of the skin was and is used by various tribes in countries around the Amazon (especially the Katukina, Kaxinawá, Matsés, Mayoruna and Yawanawá), as part of purification rituals and rituals to enhance and boost hunter skills [4]. Nowadays, the application of Kambô and its immediate effects can be seen on YouTube movies, including emesis and edema formation of the face [5-9]. Clearly we can learn from these videos that in most cases the symptomatic phase starts minutes after intake, mostly with nausea, vomiting and edema of the face, and lasts mostly for less than an hour up to in some cases, some hours.

The research into the skin secretions of the frog Phyl-



Figure 1: Kambô scars at one person on chest and both arms; The circle of 21 scars was administered during 2 separate rituals.

lomedusa bicolor and its effect has led already to more than 200 articles indexed in the scientific database PubMed; the first papers from the 60s of last century [10]. The research group of Erspamer, who started analyzing secretions of frogs, toads and octopi in the 30s of last century, lay the foundations of our knowledge of the functions of serotonin, and demonstrated that the active compounds in Kambô were peptides [11-15]. These biochemical papers discuss the many different peptides such as phyllocaerulein, phyllomedusin, phyllokinin, sauvagine, dermaseptin B2, adenoregulin, deltorphins, and dermorphin in detail, and this is not our current focus.

The clinical literature to date only covers some adverse events, always based on one case only [16-21]. No reference is made to the perceived transpersonal and healing aspects of rituals using Kambô.

Kambô rituals and Use in the West

Recently I noticed remarkable scars on the chest and arms of a person from the Netherlands, interested in shaman's practices (Figure 1). The person involved explained to me that the origin of his scars was based

on four Kambô rituals. Kambô is positioned at some internet sites as an Amazonian medicine that can treat ailments ranging from depression to cancer. In most non-medical sources it is referred to as a medicine. Often it is also referred to as Iasa vaccine.

Clearly rituals given by shamans are as old as mankind itself. Already in the stone age we find signs of rituals to promote health, vitality, fertility and to bring harmony or to prepare for war. Nowadays many are feeling a great emptiness in our culture, so devoid of meaning, purpose and connection. This is probably one of the reasons people turn to alternative ways to experience life in all its dimensions.

By the end of last century Amazonian shamans started to visit Europe and the USA introducing special healing rituals based on plants, such as Ayahuasca (dimethyltryptamine), peyote (mescaline) and mushrooms (psilocybin). Many reports of healing and transpersonal experiences can be found in literature [22].

Meanwhile there is an international association of Kambô practitioners (IAKP), and on the website one can find many stories and facts around Kambô administra-

tion and healing rituals [23]. Their goal is to: 'Support and encourage the safe, responsible and professional use of Kambô through training, raising awareness, developing and sharing knowledge, research, ethical behavior and best practice'.

One can purchase Kambô sticks via internet shops, and the origin of the sticks is claimed to be directly from the Matses indigenous tribe from Peru in the Amazonian jungle. The sticks will arrive wrapped in something like a corn leaf, with the intention to protect the 'sacred contents'. After unwrapping the Kambô stick, one can observe on its surface the dried venomous secretions of the frog. It comes with the explicit warning that the 'sacred medicine' has much power and can potentially be dangerous and toxic, if one does not use it in the correct setting and context and guided by an experienced person who applied Kambô more often.

As one can so easily obtain Kambô sticks, the rituals seem therefore relative easy to perform, however, there are many aspects relevant if one wants to create such a ritual, and the leader needs to be quite experienced, especially since some effects can be quite amazing or threatening. Effects vary from extreme vomiting, diarrhea and dizziness to feeling like a God. Also, symptoms like Quincke edema around the eyes, lips or entire face can be seen frequently after applying Kambô, indicators for a transient anaphylactic shock. Sometimes people report feelings of choking during the edema phase. At many YouTube movies on Kambô these adverse events and its development in time can be witnessed. Most of these symptoms can be related to the pharmacological effects of various neuro-active peptides which have been identified in the secretion, such as phyllocaerulein, phyllomedusin, phyllokinin, sauvagine, dermaseptin B2, adenoregulin, deltorphins, and dermorphin. To date no effects suggesting a hallucinogenic potential of the secretion have been reported.

Traditionally, the dried secretion is combined with some water (or saliva) to form a paste. Some small points on arms, legs or chest are burned through the skin with a smoldering piece of wood. After removal of the skin burns, Kambô is applied on the fresh burns. Due to the vasoactive properties of some of the peptides the active compounds enter the lymphatic system and subsequently the bloodstream quickly and effects can be seen and felt within minutes, while they in general do not last long (some hours, such as reported in one case [21]).

Transpersonal and Healing Experiences

As it is quite important to understand the way people perceive the use of Kambô, we will discuss in this section some experiences, and will quote these experiences without changing the wording (verbatim). This helps understanding the phenomenology of the Kambô subjective experiences and the significance of the experience for the user.

In the next paragraphs one will be able to find personal statements of users, which indicate that many Kambô users perceive and explain the effects from a shamanistic and/or healing context.

At certain Kambô sites on Facebook, I posted requests for sharing with me healing and transpersonal experiences, in order to present and comment on those in this paper. One of these sites, 'Kambô Healing', has more than 5600 members (status September 2018). In this paper, some personal witnesses' reports covering the effects on somatic wellbeing, psychic wellbeing and transpersonal experiences are presented and discussed.

Somatic wellbeing

One practitioner claimed on the internet to have successfully treated thousands of people with anxiety, depression, PTSD, chronic fatigue, chronic pain, HIV, arthritis, diabetes, candida, herpes, high blood pressure, cancer, fertility issues, recurrent infections and much, much more. He stated that no matter how serious their condition was to start with, they have all benefited from targeted and precise Kambô treatments [24]. The following individual testimonials suggests improvements of somatic wellbeing.

1. I have chronic illness. I was on a disease management plan for years but nothing worked and eventually my immunologist told me I had to leave my country and move to high altitude. That's where I found Kambô - in Cusco, Peru. It has given me a quality of life I've never known. Not only am I back in my country, I've cut down from 15 course of antibiotics per year to 2-3. I am now active and exercise regularly and the most pain free I've been in 15 years. I did my first Kambô (3 sessions over three weeks) two years ago. I had a year of amazing health then needed to do another 3 sessions. That was 10 months ago and I'm still going strong. The Kambô session for me are particularly strong and unpleasant and I am actually allergic to the Kambô from a skin level, not a system level. So, I have a rough 10 days after doing a session - but it is so worth it and every day I feel blessed to have found this medicine. I wish you the best of luck. I know how much of a beautiful gift health is and I hope you get to experience benefits like I've had.
2. I have both (R.A. & Hashimoto) and started using Kambô in 2014. I needed 7 inoculations periods, in 1 year, to calm down both (R.A. & Hashimoto) and both now are under control. I also rearranged my diet a lot, including a lot of herbs and supplements. I do maintenance inoculation once a year. I also use CBD which keeps the inflammation down. (I follow up with blood tests every 6 months) Because I had such a great turnaround and remarkable response I learned how to administer Kambô and now can offer Kambô and prescribed herbs with ionic footbaths for detoxing. Good luck with your healing. My healing

has gone beyond my expectations. I cannot express enough gratitude for being alive & well, outta my funky spaced out depressed lethargic illness.

3. I did Kambô 3 times within a month, all went very well and I was very happy that i did it. It was good for detox. I was on cortisone creams for a long time because of my dermatological skin problems. I had the feeling I need to stop and clean up my body. For three weeks now I had big time rush around my eyes, mouth and fingers. It looks like something is triggered in my body and skin keeps responding (Itching, watery and dry skin) I don't feel like taking Cortisone again and trying to wait until it gets better by itself.
4. I had serious chronic health problems mostly linked to autoimmune. For a long time Drs. kept testing me for Lyme's disease. I had fibromyalgia, adrenal fatigue, post trauma, candida, insomnia, autoimmune arthritis, and other stuff chucked in for good measure. This all lead to chronic health problems which became systemic. For six years, I was pretty much house bound. For three of those years needed help with washing my hair and even getting on and off the loo. Often couldn't hold a cup of tea... A year ago I started on my journey with Kambô. I'm transformed. Last week I stomped around Dartmoor for hours in bad weather and felt amazing. Now take no pain relief. First time in 22-years. I feel totally awesome. Reborn. And ready to begin a new exciting chapter... Kambô has changed my life. I couldn't recommend it highly enough. The most generous, magical medicine on the planet in my eyes...Go for it....
5. It has been managing my hypertension the same as when I took Losartan and since taking it. I drink less alcohol, have less arthritis pain, more energy and a greater sense of tranquility. It also seems to move me away from non-loving relationships.
6. Kambô healed my hepatitis C. I have seen many miracles with this medicine. I have and have seen people connect with the spirit of Kambô. They have and I have also seen the frog while receiving the medicine.
7. Related to thrombocytopenia one practitioner wrote: I would see no reason to assume that Kambô could not help with this condition. It is also just a symptom for a deeper issue after all. But as always for me the relevant question would be if the person *feels called to the medicine*. Our higher self guides us on our healing path, and the higher self knows which healing modality we need at which point in time.

Psychological wellbeing

1. I did Kambô last month for the first time. I did 3 sessions in 3 days. I have suffered from severe depression since I was 9-years-old and studied and tried so many healing modalities. Kambô is the only thing that has shifted the depression, I can no longer feel

into it which is amazing as I didn't go a day without feeling suicidal before. In the last month, I have not wanted to eat meat, my sleep and energy levels have improved. I have more motivation.

2. One practitioner reported to me that he had participants who under Kambô relived parental rape unknown prior to Kambô, fought against possession of diseased spirits, faced extreme mourning for death of beloveds, and spoke about a man in his 50s having 7 ejaculations in a love night 2 days after Kambôsession.
3. Cocaine is quite the nasty addiction but Kambô will help detox reduce some of the urges and will support the personality. I work with Kambô, and it is absolutely effective with addiction. I have seen great results with alcohol addiction.
4. Alcohol abuse in combination with suicidal ideation strongly speaks for demonic possession. That is not at all a good basis to work with Ayahuasca, he would quite likely have a horrible experience and the problem could even get worse, unless he would be lucky enough to work with a most competent shaman under the best possible circumstances. Systematic Kambô work makes much more sense here, it will remove the negative energies step by step and will weaken the demonic influence that he is under.

Transpersonal experiences

1. Kambô takes the things that prevent one from seeing clearly and perceive. I had very big expansion in consciousness after Kambô, mostly after my first one. I was overwhelmed by my ability to perceive. I was so open and yet so centered. My heart cracked open, I looked at the waves by the see whole day and could perceive so much of the in between and things which are less condensed.
2. I worked and purged with the energy of Kambô up to a year after my first session. If you connect to the medicine deeply, you do not necessarily need it physically, but can connect with it through ceremony without having to take it again. At least that's my experience. I even had someone reading my energy field during that time and that person asked me whether I had taken Kambô recently, although it was more than a year ago at that time.
3. There's literally a vibration that Kambô gives the person that is seen and felt in the person's energetic field. Even biologically, (like with a plant dieta) if the person has been doing a lot of Kambô, they will be fused with the spirit, vibration, and energy.
4. The frog doesn't catch viruses, have known predators, can see in a 360 view, and hops in a forward direction. This energy will carry through the practitioner. Even animals will know it, they'll become attracted to the person or even steer away.

Miscellaneous remarks

1. I come from the traditional way of Kambô, where it's highly respected and care taken in deciding who will serve you. It's another side to Kambô that most westerners don't know about, because it's approached so practically and clinically in the West (thanks to several "training schools" who have steered away from the core of what Kambô really is), thus losing a lot of its healing power from the energetic and shamanic realm.
2. I personally do Kambô weekly (usually), unless I'm dieting on other plants, otherwise Kambô will kick out the other energies I'm working with. A friend of mine went on a visit to the land of katukinas, north of Acre in Brazil. During his stay, he talked to a 90-year-old Indian who said well to him: '- My dad takes Kambô every day 7 points !!' note: his father is alive...
3. The physiological effects of Kambô is explained by the action in the brain of 9 bioactive peptides which have anti-inflammatory, anticancer properties, they detox liver, gallbladder and intestine, empower the surrenal glands (providing an immediate strong sexual drive) activate the pituitary gland and 75 percent of the endocrine system etc. to give you practical examples for instance caerulein lowers and raises the blood pressure, creating swing between warmth and cold, dizziness and fainting, like during a flu, adenoregulin switches on energy in the cells which destroys bacteria and viruses, giving a feeling of warmth through the body, phyllomedusin provokes a deep cleansing in the intestine, nausea and diarrhea, tachichinin activates the dopamine circuits of the brain helping in this way with degenerative brain diseases such as Parkinson and Alzheimer. The trembling of Parkinson people disappears. Regarding the activation of the opioid brain circuit made by deltorphin and dermorphin you can compare the effect of Kambô to a sportive training such as a long run or swim, your body is overwhelmed by a feeling of well-being.

Adverse Events

We identified 8 papers in PubMed related to Kambô side effects/adverse events.

The first paper from den Brave, et al. was based only on the observation of some scars on the shoulder of a patient and was a letter to the editor [25].

The second paper of Leban, et al. dealt with the emergence of a transient syndrome of inappropriate antidiuretic hormone (SIADH) secretion, accompanied by signs of rhabdomyolysis, due to the combination of Kambô burns, extreme agitation and the drinking of six liters of water after the ritual [20]. After 3 days, all symptoms vanished and laboratory values returned to normal.

The third paper of Pogorzelska and Łapiński dealt with a patient with a chronic history of alcohol and Cannabis use, who used Kambô to maintain abstinence of drinking and smoking [19]. Patient had clinical and laboratory test results indicating hepatitis, and after 10 days of supportive treatment symptoms vanished and the test results improved.

The fourth paper of Aquila, et al. described a sudden death of a 42-old overweight man, who was a chronic user of Kambô [18]. After autopsy left ventricular concentric hypertrophy of the heart was found, adipogenesis and white sclerotic areas on its external surface of the heart muscle, with clear signs of coronary artery disease. Other findings were aortic atheromatosis, thyroid goiter, hyperplasia of the spleen, liver steatosis, and intramedullary adrenal hemorrhage. It was suggested that in this case perhaps the hypotensive effects of Kambô could have resulted in reduced myocardial perfusion, tachycardia perhaps leading to a cardiac arrhythmia and sudden death.

The fifth paper of Li, et al. described a 24-year-old woman, brought to the emergency department, due to nausea, vomiting, flushing, facial swelling, altered mental status, and agitation 22 h after a Kambô ritual. Laboratory tests showed a transient leukocytosis and thrombocytopenia, and indications for rhabdomyolysis, explained as secondary to the agitation: a profound elevation of CK (38,574 U/L) [17].

The sixth paper from de Moraes, et al. discussed a case of an acute intoxication after an oral administration of 100 ml of Ayahuasca and dermal exposure of Kambo, 5 dots, for treatment of depression; The patient was asymptomatic after 6 hours and discharged the day after exposure without any sequel. The case described was not detailed at all, and most of the listed symptoms are known to occur after drinking Ayahuasca [21].

The seventh paper from Kumachev, et al. described prolonged nausea, very frequent episodes of vomiting, (circa 50), and abdominal discomfort, up to 8 hours after a Kambô ritual in a young woman [15]. Symptomatic treatment helped and within an hour the symptoms resolved.

The last paper from Roy, et al. described a labile woman who took multiple doses of the Kambô and developed a paranoid psychosis, responding well on risperidone [16]. The causality of this case seems questionable.

Furthermore, at the internet one can find other, perhaps less reliable references to adverse events, such as: 'I applied Kambô to someone (to their upper left arm) 5 days ago, and yesterday they began to feel a painful sensation in the localized area that has since spread down to their hand. She says it feels paralyzed for a moment, before painful and kind of pins and needles sensation'.

We cannot check the correctness of such reports,

published on the internet and not in a peer reviewed Journal. Nevertheless, it should be a warning to be extremely cautious during a Kambô ritual, and it seems to us such rituals can only be guided by quite experienced moderators, who can differentiate early on between effects which are benign and transient versus life threatening adverse events. It would also be wise to administer to people who insist on experiencing such ritual the first time with a very low dose, preferable the lowest dose possible, to test the sensitivity of the individual for allergic reactions and related adverse events.

One of the founders of the Kambô practitioner's organization emphasized that Kambô works on many levels-physical, emotional and energetic, and with very few contraindications, this medicine is accessible to a wide number of people of all ages [26]. The latter part of the statement needs more support from facts, in the light of the adverse events triggered by Kambô use.

Contraindications, Interactions and Recommendations for its Use

There are various lists on the net summarizing contraindications for the use of Kambô, such as the one presented at the Kambô Healing Facebook group, including all kinds of cardiovascular, hematological, neurological and psychiatric disorders, mostly without referring to any source. However, an experienced Kambô healer discussed this lists and pointed out that he majority of these "contraindications" did not exist in his practice. Clearly there is not much clarity yet in this field.

Based on some recent case-reports one could argue to exclude severe and unstable cardiovascular conditions, hypotensive syndromes such as Shy-Drager and recommend not to drink too much water after a ritual, in order not to provoke a SIADH syndrome. Furthermore, as Kambô seems to be used by the tribes to terminate pregnancies, one would like to exclude pregnant women.

Interactions have not been reported officially, but given the multitude of bioactive peptides, we recommend to not combine Kambô with substances such as Ayahuasca, Jurema, and other entheogens, and avoid its use in case of polypharmacy. We also warn for drinking excessive amounts of water after the ritual.

It is always recommended for those who want to take part in a ritual, to check whether the practitioner is officially registered in the list of this international association, IAKP. Furthermore, it would be recommended to discuss the intention of participating in a Kambô ritual with the family physician.

In addition to this, it is recommended to ask some significant other to join if one intend to participate in a ritual.

Conclusion

Kambô use becomes popular in the west, probably

due to the fact that people are looking for healing and cleansing rituals, and related mystical experiences. Such healing rituals are based on shamanic work and can be regarded as forms of transpersonal psychotherapy [26]. The vomiting, the diarrhea and other side effects are perceived as symptoms of a cleansing ritual, removing toxins and stagnation or energetic blocks from the body.

The intense relief after the acute intoxication supports various transpersonal feelings, including the 'feeling like a God'.

Kambô can induce transpersonal states, but is has no psychedelic/hallucinogenic effects of its own. It is perceived by users to feel healed, transformed and cleansed after a ritual, as documented by many stories at Fora and websites. The fact that many compounds of the frog's secretion have been assessed *in vitro* and *in vivo* for biological effects, such as for anti-inflammatory, anti-cancer and anti-bacterial effects induces the suggestion in users that the secretion can have such therapeutic effects also when used in a ritual.

It is recommended that use is monitored closely by experienced therapists, due to the possibility of serious adverse events, and clear recommendations related to its use are given.

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