A unique association of an ancient Indian custom of body roasting and the postpartum psychosis responsible for the occurrence of major burns: A case report and challenges posed by postpartum psychosis in the treatment of burns

ABSTRACT
Introduction: We report a unique association of an ancient Indian custom of postdelivery mother roasting and postpartum psychosis responsible for the causation of major burns.

Materials and Methods: A 20-year-old postpartum female reported with 40% second- and third-degree total body surface area burns. The combination of the ancient Indian custom of mother roasting and postpartum psychosis led to these major burns. The conventional treatment of burns in the form of IV fluids, antibiotics, and dressings with silver sulfadiazine creams was carried out. The psychiatrist was consulted, and the antipsychotic medicines were started for an altered behavior. One month after the burns, she developed deep-vein thrombosis with venous gangrene of the left leg for which she required a below-knee amputation. She required 45 days of hospitalization and six surgical procedures in the form of debridement and split-thickness skin grafting. Problems such as hypotension, noncooperation due to the wild swing in the moods were overcome by proper fluid and electrolyte management, an adjustment in antipsychotic medicines, appropriate postoperative care, and chest physiotherapy.

Results: One year of follow-up showed good stable scars. At present, she can perform all domestic as well as labor work on the farm, with the help of a below-knee prosthesis. There is no element of psychotic behavior at present.

Conclusion: This case report sheds light on an ancient Indian custom of mother roasting and postpartum psychosis and its dangers in contracting severe burn injuries. Challenges posed by postpartum psychosis in the treatment of burns have been discussed.

Keywords: Burns, child delivery, Indian custom, mother roasting, postpartum psychosis

INTRODUCTION
India is one of the world’s oldest civilizations with a lot of cultural diversity and heritage. Medical Science was one of the areas where surpassing advances had been made. Ayurveda, an indigenous system of medicine was developed in Ancient India. The word Ayurveda means the science of good health and longevity of life. It defines health as equilibrium in three “doshas” and diseases as the disturbance in these three “doshas.” The methods to recuperate disturbed equilibrium and disease treatment were based on the use of herbal medicines, diet, bath, massage, the use of purgatives and diuretics, accompanied by rituals, spells, incantations, sacrificial offerings, prayers, and weird dances. The beneficial practices of “mother-roasting” after birth to get faster healing as well as the family involvement in birthing to prevent psychosis were integrated into biomedical practice.

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If you play with fire, you are likely to get burnt, and these rituals are also prone to cause minor and major accidental burns.

**MATERIAL AND METHODS**

A 20-year-old postpartum female reported with 40% second- and third-degree total body surface area burns. The burned areas were predominantly on posterior aspects of the body involving upper limbs, lower limbs, and whole back. After massaging her body with oil, she was lying without clothes on the back on a cot made up of jute fibers with the fire kept under her bed as a part of an old Indian tradition. The oil suddenly got ignited. As she was suffering from postpartum psychosis, she could not immediately realize the rise in temperature and sustained deep burns [Figures 1-5].

The patient had delivered a female child 15 days before the burns. Soon after the delivery, she developed symptoms of psychosis and was not able to feed or rear her child properly. Consequently, the child died 10 days after its birth. There was no history of mental disorder or postpartum psychosis at the time of the previous delivery of a male child before 4 years. There was no positive family history of psychosis among close female relatives of the family. The patient’s thyroid function tests found to be normal.

The conventional treatment of burns in the form of IV fluids, antibiotics, and dressings with silver sulfadiazine creams was carried out. The psychiatrist was consulted, and the antipsychotic medicines were started for an altered behavior. The electroconvulsive treatment was not required as the patient improved on the medical line of treatment. She required 45 days of hospitalization and six surgical procedures in the form of multiple debridements, and split-thickness skin grafting. Unfortunately, 1 month after the burns, she developed deep-vein thrombosis with venous gangrene of the left leg for which she required below-knee amputation. The exact cause of deep-vein thrombosis could not be determined, but we felt that the drugs used for suppression of lactation were the culprits and she was not on any prophylactic anticoagulants [Figures 6-9].
RESULTS

One year of follow-up showed good stable scars with no evidence of contractures. At present, she can perform all domestic as well as labor work on the farm with the help of a below-knee prosthesis. There is no element of psychotic behavior at present. She has been advised to refrain from pregnancy for the time being.

DISCUSSION

An ancient Indian tradition believes in keeping new mother warm with the help of fire kept under her bed to facilitate the healing of internal body organs. In ancient times, Indian women used to deliver 6–10 children during their childbearing age. Lack of education, nonavailability of contraceptives and high infant mortality rate were the main reasons for this high birth rate. In lieu of good contraceptive devices, the most effective way to delay the pregnancy was to prolong lactation. It was jokingly being termed as “lactation to gestation and gestation to lactation.” To prepare the body for another pregnancy faster, a nice scientific tradition of “body roasting” was adopted. It is still being used in many parts of India. The discs are prepared from the cow dung which is dried and stored. Mother’s body is massaged gently with the oil. These discs are placed in a container and are ignited. This container is put below a cot made up of jute, on which the lady lies down with exposed back. These discs burn very slowly delivering enough warmth to the body. This is being carried out a few hours daily for approximately a month.

This “mother roasting” ritual had a valid base in accordance with the prevailing situation in that era and had/has a place even today. This practice helps in reducing postpartum uterine cramps, bleeding, and discharge. It also helps in the rapid involution of the uterus and other pelvic organs to regain their nonpregnant tone and size much faster, making them fit for another pregnancy. Easy breast milk flow has been observed clinically. These practices also provide enough rest to the mother before recommencing her social responsibilities.

From an anthropological perspective, it seemed that women in societies with these traditional customs not only had relatively easy births but also enjoyed rapid and complete
recoveries with minimal complications, especially regarding postpartum blood loss.

Apart from India, the fire treatments were practiced throughout Southeast Asia, including the Philippines, Malaysia, Sumatra, Sarawak, Thailand, Vietnam, Borneo, by few cultures from Australia to Arizona and China. Heat roasting traditions were established not only to keep mother warm but also to infuse heat deeply into the woman’s body, especially for the purpose of facilitating postpartum healing of internal organs.

Although these rituals are good for body healing, their biggest disadvantage is the occurrence of minor or major burns, and it is important for the reconstructive surgeon to keep this etiology in mind and accomplish the treatment accordingly.

Postpartum depression and psychosis are hormonally based psychiatric illnesses with a frequency of 1–2/1000 births pose great risks to the new mother and her family. The first 30 days after delivery is a high-risk period for the development of acute psychotic disorders. It is believed that primarily an endogenous etiology of psychosis gets triggered by the physiology of childbirth. A positive correlation between the birth of a female child and psychosis has also been found. Clinically, there is a rapid change of mood and frequent mental confusion in a mother. As it is rarely diagnosed early, child abuse is one of its consequences. Immediate psychiatric consultation is imperative. Mother and child should be hospitalized once symptoms of postpartum psychotic have been detected to ensure the safety of both. Quiet environment, emotional support, psychotherapy, and electroconvulsive therapies are the most important aspects of the treatment. Prevention of psychosis is part and parcel of the treatment, and most of the time, it is neglected. Efforts should be made to prevent its precipitation in subsequent deliveries.

Postpartum psychosis poses special challenges to the reconstructive surgeon in the treatment of burns. Vigilance is required about the hypotension and its cascading effects on other systems by some of the antipsychotic medicines. Frequent swings in the mood may lead to the removal of IV lines and dressings by the patient. Noncooperation on the part of the patient may cause inadequate delivery of calories heading to delayed wound healing. The “nil by mouth” period before and after electroconvulsive therapy affects the nutrition also. Many times, the patient is being knocked down by sedatives which increase the chances of lung infection and pneumonia. Skin grafts have to be secured properly. Even though most of these technical hitches were encountered by us, we treated her in a conventional way of regular dressings, debridement, and skin grafting. The occurrence of sudden deep-vein thrombosis and limb gangrene required below-knee amputation during the treatment of this patient. Burned areas of the breast require termination of lactation. Mothers suffering from postpartum psychosis are often unable to rear a child properly; hence, the breastfeeding has to be stopped with hormonal treatment which can increase the chances of deep-vein thrombosis and thromboembolism. Drugs such as diethylstilbestrol and bromocriptine have shown severe potential side effects such as thromboembolism, cerebral accident, and myocardial infarction. They are not recommended for lactation suppression now a day. Lisuride and cabergoline are the preferred drugs to suppress lactation at present. From our experience, we recommend prophylactic anticoagulants when lactation suppressing drugs are being used.

CONCLUSION

Although minor burns are common with mother roasting or the heat treatment which heal in no time, the association of traditional body roasting custom and postpartum psychosis causing burns of this magnitude have been described for the first time. Awareness about the dangers of burns where these types of customs are being carried out and the need for modifications in the treatment of burns because of psychosis is important.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients
understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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