



## Original Research Article

## Profile of Intentional and Iatrogenic skin afflictions: An observational study

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## ABSTRACT

**Background:** Intentional skin afflictions are often done as a means of relief from medical disorders as in the case of skin branding or as a means of cosmesis and beautification as in body piercing and tattooing. Such practices often have medical and psychosocial consequences.

**Materials and Methods :** An observational study was carried out at a teaching hospital where a total of 36 (20 male and 16 female) consecutive patients with skin affliction which were either intentional and/ or iatrogenic, were included in the study after informed consent.

**Results:** Medical consultation was done for variety of skin afflictions and their consequences including skin branding (8), tattooing (12), body piercing(4), keloids(9) and hypertrophic scars(3). Abdominal causes of branding like ascites, umbilical hernia, chronic abdominal pain, huge splenomegaly were present in subjects who had undergone skin branding from faith healers. Psychosocial consequences of subjects who came for intervention and advice regarding unwanted tattoo marks and body piercing were Tattoo regrets, Army tattoo Policy, Requirement for job procurement, Relationship Conflicts, Disapproval from Peers, Self disapproval, Body image problems, Parental disapproval and others. Subjects having hypertrophic scars and keloids sought treatment for medical issues like pruritus and fear of carcinogenesis as well as for cosmetic reasons.

**Conclusion:** Studying profile and psychosocial problems related to intentional/iatrogenic skin problems may give insight for prevention of such consequences in dermatology and medical practice.

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## 1. Introduction

Intentional skin afflictions may occur due to skin branding, tattooing, body piercing and artistic scarifications. Skin branding is type of intervention done by faith healer for relief of pain or for purpose of healing or treating a medical disorder. Intentional skin afflictions are done for the purpose of body art which can be tattooing, body piercing and/or artistic scarifications. Iatrogenic skin afflictions like operative scar which can result into hypertrophic scar and keloid formation. Seeking treatment and intervention

of past skin afflictions is one of the usual dermatology practice. These form of skin afflictions may have various consequences including ethical, as it may have done in past without their knowledge or without prior information of medical consequences. Psychosocial domain before and after such afflictions is worth noting as it may have bearing on subsequent medical management.<sup>1</sup>

Skin branding is a process affliction of skin with iron or wooden rod which creates third degree burns and may result in permanent scars which is difficult to be treated.<sup>2,3</sup> This traditional practice is result of cultural misbelieves and is used for various systemic and local conditions by faith healers in developing countries including India.<sup>3,4</sup>

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Skin branding not only is practiced in adults but also in children.<sup>5,6</sup> Its use in current times reflects insufficient impact of modern health services on traditional practice which has medical, ethical and psychosocial consequences and can be cause of delay in treatment.<sup>4-6</sup>

Cutaneous scarring, not yet fully understood healing process, is due to fibroblastic tissue replacing normal skin tissue.<sup>7</sup> Normal visible incision scar, hypertrophic scar and keloids can result in physical and psychosocial sequelae and may be stigmatizing. Keloids which are elevated scars, spreading beyond the original skin afflicted sites can occur due to cutaneous injury and irritation, including, surgery, vaccination and skin piercing.<sup>7-9</sup>

In modern times, body decoration practices includes tattooing, body piercing, body branding and scarification has grown fast. Such a study, done to impart scientific knowledge on the risk involved in such practices related to body art has become imperative.<sup>10,11.</sup>

## 2. Materials and Methods

An observational study was carried out at teaching hospital. Consecutive 36 subjects who had Intentional and/or Iatrogenic skin afflictions seeking medical advice for such affliction and/ or had medical conditions associated with such affliction were included in the study. A research question for this study was “Why and for what consequences do subjects having Intentional/ Iatrogenic skin afflictions seek scientific medical advice?” These cases were included from dermatology and general medicine departments of teaching and university affiliated hospital. Quantitative as well as Qualitative data analysis was done.

## 3. Results

A total of 36 patients were included in the study of which 20 were male and 16 female. The average age of the patients was  $35.2 \pm 14.2$  years and the age range was between 8 and 67 years. Skin branding was present in 6 adult patients, 5 were males and 1 female. 12 patients had come for tattoo consultation for removal or seeking for conservative therapy, 6 for body piercing sequelae, 7 for Keloids, and 5 for hypertrophic Scars.(Table 1)

Out of 6 skin branding cases, 5 patients had come primarily for medical treatment while 1 patient had branding mark of childhood which was cosmetic concern and for that reason he visited the dermatology department. One patient of alcoholic cirrhosis had undergone branding in the course of his treatment for gynecomastia which could have been due to his medical condition of cirrhosis of liver and /or his drug spironolactone which he was taking. All other subjects had come primarily for dermatology consultation for seeking either interventions and /or conservative management. All these patients were interviewed for reasons of seeking medical advice. Quantitative as well as

qualitative narrative analysis was done for all the subjects to find out reasons for seeking medical advice which is documented in Table 2 and Figures 1, 2 and 3, of those who had skin branding and Table 3 and Figures 4, 5 and 6 of other cases.



**Fig. 1:** Patient having skin branding marks on lateral aspects of abdomen and over umbilicus



**Fig. 2:** patient having circular skin branding mark around umbilicus having huge splenomegaly

## 4. Discussion

Study center involves subjects coming to the hospital from rural as well as urban population of Gujarat and also

**Table 1:** Profile of of Intentional and Iatrogenic skin afflictions (n=36)

| Skin disorder      | Male | Females | Total Number of Subjects |
|--------------------|------|---------|--------------------------|
| Skin branding      | 5    | 1       | 6                        |
| Tattoo             | 6    | 6       | 12                       |
| Body piercing      | 2    | 4       | 6                        |
| Keloids            | 5    | 2       | 7                        |
| Hypertrophic scars | 2    | 3       | 5                        |
| Total              | 20   | 16      | 36                       |

**Table 2:** Reasons for consultation and their consequences in 6 subjects having skin branding.

| S.No     | Reason   | Narrative  | Remarks  |
|----------|--|--|--|
| 1.       | Ascites and Cirrhosis with Umbilical Hernia        | Branding did not help and so came for further treatment                                | Delay in treatment   |
| 2.       | Ascites, and Alcoholic Cirrhosis with Gynecomastia | For Gynecomastia   | It may be due cirrhosis of liver and drug spironolactone   |
| 3.       | Splenomegaly in case of sickle cell anaemia        | Had faith in such healing technique/Earlier other tribal subject had beneficial effect | In a reference case spleen regression in a case which was referred may have been due to splenic infarct  |
| 4 and 5. | Chronic abdominal pain                             | Had relief of pain for some time   | Counter irritation effect of third degree burns in skin Branding may cause temporary pain relief. <sup>2</sup> Finding out cause of chronic abdominal pain is essential. |
| 6.       | Unknown cause of skin branding in childhood        | Want to get rid of scar.   | Skin branding is performed in children also.   |

**Table 3:** Reasons for consultation and their consequences in Intentional and Iatrogenic skin afflictions (N=30)

| Skin Disorder                    | Reason   |
|----------------------------------|--|
| Tattoo(12)                       | Tattoo regrets (6), Army tattoo Policy (2) Requirement for job procurement(1), Relationship Conflicts (2), Disapproval from Peers(1) |
| Body piercing (6)                | Parental disapproval *(1), Cosmetic* (4), Surgical (1)   |
| Keloids(7)+ hypertrophic Scar(5) | Cosmetic* (6) fear of extension of cancer in scar tissue(1) pruritus at the affected site (3)  |

\* Various psychosocial issues and stories were involved in above reasons

**Fig. 3:** Patient having circular skin branding mark around umbilicus and a linear branding mark below umbilicus and having ascites and umbilical hernia**Fig. 4:** Keloidal scars

from central and western India which is bordering Gujarat. Young university students from our own campus also seek dermatological and cosmetic consultation. This study was intended to know the profile of dermatological, medical and psychosocial consequences of some rituals and body art



**Fig. 5:** Keloidal scars



**Fig. 6:** Partly treated tattoo mark

intentional skin affliction activity like body piercing and tattooing. Traditional healing practice like body branding which is also not unusual in clinical practice in India can have medical and psychosocial issues.<sup>3-6</sup>

History of skin branding relates to “African American slave” era. Description of oppressed person being identified by branding scar present on the body; is available.<sup>12</sup> Marks of skin branding was also used as a symbol to signify membership of particular organization.<sup>12</sup> This traditional practice was used by ancient healers for pain relief and also in various chronic ailments. It is believed that it works on counter-irritation theory.<sup>2</sup>

One of the medical consequences we found in this study was delay in diagnosis of and its subsequent management of the medical condition. Skin branding is advocated as a result of belief system in which both healer and subject feels that it works. Many such interventions may give false hope in untreatable condition. It may cause further harm and wasting of golden hours of treating time in many critically ill conditions as was reported in a case in 1982; having tuberculous meningitis and disseminated tuberculosis having 106 branding marks all over his body.<sup>4</sup> Skin branding is also reported being done in illness like tuberculosis, chronic peripheral neuropathy and various gastrointestinal, hepatobiliary and abdominal conditions.<sup>6,13</sup> Ugly scars inflicted in childhood may cause concern in future to a young adult as it may not appear aesthetic, which happened in one of our cases. Secondary infection following branding could result from disruption of the skin barrier. In some cases this secondary infection may not be limited to the skin and may involve deeper structures too. Shah ad et al reported a case of bacterial peritonitis due to E.Coli following skin branding leading to decompensated cirrhosis.<sup>2</sup>

The branding sites also could lead to formation of hypertrophic scars and keloids. Keloids are extensive growth of scar tissue beyond the border of the original wound and are more symptomatic than hypertrophic scars. According to Santosh et al, keloids are 15 times more likely to develop in pigmented races as compared to whites as there is a genetic predisposition to formation of keloids in pigmented races.<sup>14</sup> Keloid formation was a significant problem in our subset of patients as well. Keloids also tend to be far more difficult to treat as compared to hypertrophic scars.<sup>15</sup> Long standing cases of scars can also rarely have malignant potential which was a concern of one of our cases who had hypertrophic scar after radical mastectomy.<sup>16,17</sup> Patients having keloids and hypertrophic scars comes to dermatologist for demand for local application cream, intralesional conservative intervention by 5-Fluorouracil/steroid or for laser and surgical management.<sup>18,19</sup>

Psychosocial consequences of subjects who came for intervention and advice regarding unwanted tattoo marks

and body piercing were conspicuous. Tattoo regrets, Army tattoo Policy, Requirement for job procurement, Relationship Conflicts, Disapproval from Peers, Self disapproval, Body image problems; Parental disapproval and others were the reasons for dermatological treatment. Some of the subject wanted the tattoo removal in a single appointment and immediate as it hindered their job prospects. Dermatologist dealing with tattooed patients should understand, communicate and counsel about this skin affliction which has psychosocial consequences.<sup>1,20</sup> Medical and infectious complications are also ascribed to all intentional and iatrogenic skin afflictions.<sup>21,22</sup>

## 5. Conclusion

Many patients especially in rural India, consider skin branding as a mode of therapy for acute and chronic ailments which may lead to delay in diagnosis and treatment. Intentional and Iatrogenic skin afflictions like tattoo, body piercing, keloids and hypertrophic scars can lead to a variety of issues including psychosocial, ethical, moral, job related and personal. These issues are often overlooked and need further interrogation. Clinicians should take utmost care to treat and manage skin afflictions to achieve the best possible cosmesis. However due care should also be given to the psychological aspects of such skin afflictions so that the holistic well being of the patients can be achieved.

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## 7. Conflicts of Interest

There are no conflicts of interest.

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