OVERVIEW OF ETHNO-FOLKLORIC BURNS IN THE REPUBLIC OF SLOVENIA

VUE D’ENSEMBLE DES BRÛLURES ETHNO-FOLKLORIQUES EN RÉPUBLIQUE SLOVENÈE

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SUMMARY. The article describes typical folkloric- and ethnographic-related burns/scalds in Slovenia. All of the mentioned burns/scalds derive from the life of a nation, and are primarily a result of specific customs, traditions and activities carried out in a rural environment. Prolonged periods of lying on a hot tiled wood burner results in deep contact burns. The preparation work for pig slaughtering (‘koline’) is dangerous due to the large quantities of boiling water required for the slaughter process and meat production technology. Distilling spirits in an improvised domestic setting is another cause of burns/scalds, as the production of spirits is carried out in several stages with a high risk of burn trauma in the event of negligence. These types of burns/scalds occur in rural farming areas. Such injuries are most often ignored and patients, children excepted, do not seek medical help until later, after they have completed their activity. Due to aggressive thermal agents, these are deep burns that often require specialist surgical care with long-term treatment. Results are evaluated on the basis of a ten-year statistical and clinical experience. Incidence of the aforementioned burns is considerably lower today than it was in the past due to national prevention measures and new European legislation on energy and agriculture. In the future, we expect these distinctive burns/scalds to become a rarity.

Keywords: burns/scalds, ethno-folkloric tradition, mechanism, surgical treatment

RÉSUMÉ. L’article décrit les typiques brûlures ethno-folkloriques, thermiques et celles dues aux liquides chauds en Slovénie. Toutes ces brûlures, s’expliquent par le mode de vie nationale et les coutumes spécifiques, les traditions et les travaux paysans. Les longues périodes de présence devant un foyer de bois actif entraînent de profondes brûlures de contact. Le travail préparatoire à l’abattage du porc, ainsi que la technologie de la production charcutière est dangereux, car il nécessite d’importants volumes d’eau bouillante. Les distilleries artisanales sont une autre cause de ces lésions, car la production des eaux-de-vie nécessite plusieurs étapes, avec chaque fois autant de risques de brûlures en cas d’inattention. Ce type de brûlures survient en milieu rural. Ces lésions sont souvent négligées (enfants excepté), car les patients ne recherchent aucune aide médicale immédiate et ne consultent que plus tard après avoir terminé leur travail. Du fait de l’agressivité des agents thermiques, il s’agit de brûlures profondes, qui souvent nécessitent des soins spécifiques chirurgicaux et un long traitement. Nos résultats sont évalués sur la base d’une étude clinique et statistique de 10 ans. La fréquence de ce type de brûlures a aujourd’hui, considérablement diminué depuis qu’une politique de prévention nationale a été mise en place ainsi qu’une nouvelle législation européenne pour l’énergie et l’agriculture. Dans le futur, nous espérons que ce type de brûlures deviendra réellement rare.

Mots-clés: brûlures therimiques, brûlures par liquide chaud, tradition ethno-folklorique, mécanisme des brûlures et traitement chirurgical

Introduction

Burns are epidemiologically-, etiologically- and demographically-influenced.1,2 Worldwide, an estimated 11 million people seek medical attention for burns annually, and 300,000 of these have fatal injuries. In the developed world, there are more fatalities among the male population due to work in high-risk situations, while in the developing countries the incidence of burn deaths is higher among the female population and is related to traditional practices, rituals and housework. Moreover, in these countries child mortality is up to ten-times higher.3 Demographically, in Europe scalds are prevalent in the northern regions among children and the elderly, while in the Mediterranean region burns are usually the result of open fires and poor prevention measures.4,5 In South America, burns are predominantly related to poverty in urban areas and the use of open fires in agriculture. In North America and Australia there is a considerably higher incidence of burns related to the explosion of high-octane or kerosene-type fuel, due to intense road, sea and local air traffic.2 In Africa, accidental burns prevail and recently also burns related to the emerging petrochemical industry. In Asia, industrial, metallurgy- and mining-related burn injuries occur as a result of the global immigration of industry. In the Indian sub-continent, burn injuries related to cooking in unsafe kitchens or using improvised heating appliances with no protection are widely prevalent.4,5 Unreported burns due to self-harm, violence, abuse or suicide attempts are of a psychosocial nature, are culture-related, and

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they are not few in number (3%).1 Burns caused by wars, disasters, lightening strikes, mass burns and burns due to radiation should also be mentioned: all of these can occur anywhere globally and are unpredictable.6

Measures for prevention and care influence the incidence of burns. Particularly important is the economic element, dividing the world into two: the developed and the undeveloped world.7

Endemic burns of an entirely local nature, that are the result of the traditions, rituals and habits of any one nation, must also be mentioned. Examples are burn trauma during fireworks displays at celebrations, pyrotechnic ceremonials or using Bengali fire.1 However, in the ethnic and folkloric traditions of every society there are certain situations where burn accidents can happen, and the resulting trauma is by no means negligible, requiring specialist medical attention. Finally, less common burns related to cultural heritage are an integral part of the overall epidemiological situation (1–2%).

This article describes folkloric burns/scalds in Slovenia, which are related to ethnography and occur solely in a rural, domestic setting. Nearly all burns occur due to improvisation, carelessness, negligence or a poor safety setting. These are burns in the elderly caused by prolonged periods of lying on tiled wood burners, burns/scalds in adults distilling spirits, and burns/scalds in both children and adults caused by pig slaughtering.

Materials and methods

We have reviewed records of patients suffering burn injuries due to folkloric practices in Slovenia, admitted to our centre over a period of 10 years from 1991 to 2001. Three main mechanisms of injury have been identified: (1) contact burns due to lying on a tiled wood burner; (2) scald burns secondary to distilling spirits at home; (3) scald burns secondary to traditional pig slaughtering.

<table>
<thead>
<tr>
<th>Mechanism of burn injury</th>
<th>Number of patients</th>
<th>Out-patient treatment</th>
<th>Hospital treatment</th>
<th>Method of treatment</th>
<th>Mean number of surgical treatments per patient</th>
<th>Duration of hospitalisation</th>
<th>Infection level</th>
<th>End result – clinical assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lying on a wood burner</td>
<td>17</td>
<td>4</td>
<td>13</td>
<td>13 surgical 4 conservative</td>
<td>2x</td>
<td>49 days</td>
<td>+++ Pseudomonas aeruginosa, Staphylococcus aureus, Enterobacteriaceae, Proteus vulgaris</td>
<td>Moderate</td>
</tr>
<tr>
<td>Distilling spirits</td>
<td>20</td>
<td>5</td>
<td>15</td>
<td>15 surgical 5 conservative</td>
<td>2x</td>
<td>34 days</td>
<td>+++ Pseudomonas aeruginosa, Proteus vulgaris, Staphylococcus aureus</td>
<td>Fair</td>
</tr>
<tr>
<td>Pig slaughtering</td>
<td>Adults</td>
<td>4</td>
<td>2</td>
<td>2 surgical 2 conservative</td>
<td>1x</td>
<td>31 days</td>
<td>++ Pseudomonas aeruginosa, Proteus vulgaris, Staphylococcus aureus</td>
<td>Good</td>
</tr>
<tr>
<td></td>
<td>Children</td>
<td>3</td>
<td>0</td>
<td>2 surgical 1 conservative</td>
<td>2x</td>
<td>39 days</td>
<td>+++ Pseudomonas aeruginosa, Streptococcus pyogenes, Proteus vulgaris, Acinetobacter calc.</td>
<td>Fair</td>
</tr>
</tbody>
</table>

Table I - Ten-year results (from 1991 to 2001)

Results

Patients admitted to our centre during the study period with burns secondary to traditional folkloric practices in Slovenia are summarized in Table I. Though their number is relatively small compared to the overall number of burn patients admitted during this period (4.6%), their management was complicated due to the patients almost always presenting late.

Contact burns due to lying on a tiled wood burner

Lying on a tiled wood burner is an old habit among the rural population, especially on cold winter nights. This can result in an initial decubitus lesion, in combination with contact burns but without accompanying significant pain, which would indicate the effects of a thermal agent. In some cases alcohol intoxication of the victim is involved which only aggravates the situation. In general, patients do not express any concern and do not seek medical attention until later, when the burn wound becomes infected and deepens. The burns can be spread over one or more prominent skin areas. These burns are seasonal. Upon admission, we note that burn wounds occur mainly on the back, in the gluteal and lumbar sacral area. In most cases, patients are hospitalised. As a rule, we carry out secondary
ters, acetic acids and methyl alcohol are released, and according to the old saying: ‘schnapps can climb well, from the stomach to the head and even into the hair’. The distillation process involves many stages and it is during this process that burns/scalds occur, whether by boiling water or boiling fruit pulp or boiling alcoholic liquid. The accidents are often prompted by improvised or inappropriate settings. Lower extremity burns are most common in the elderly, occurring as boiling alcoholic pulp splashes around, or burns all over the body caused by falling. The victims seek medical attention after completing their task. Patients generally report burns at outpatient clinics, where they receive delayed treatment which is then continued in the hospital. Burns wounds are often infected, with a tendency to deepen and with a poor healing prognosis. The likelihood of burn trauma is in direct proportion to the quality of the equipment for distilling spirits and the overall technology. Increasing professionalism and legislation has reduced the number of burn victims (Figs. 3 and 4).

Scald burns secondary to traditional pig slaughtering

The last group of burns/scalds occurs during the traditional pig-slaughtering feast in rural villages. The process starts early in the morning, boiling water in large cauldrons. Due to haste, the intense workload, time pressure, improvisation and disorganization, setting scalds tend to occur. The victims are usually adults, but may also include children. The anamnestic information as to whether the burn/scald was caused by pure boiling water or whether a meat product had already been introduced into the water is very important. Clinically, it is evident that in the second case the thermal agent is more obvious and aggressive than when scalds are caused by pure hot water, which has a strong impact on the further course of treatment and consequences. The above-mentioned injuries are underestimated, and adult patients seek medical care considerably later than children. Burns/scalds in paediatric patients are treated in cooperation with a paediatric team, according to the principle of primary necrectomy. In adults, however, we adopt a more conservative approach, and carry out necrectomy after a complete demarcation of burn wounds. Primarily, all wounds are infected which results in a poorer healing process, and addi-

Scald burns secondary to distilling spirits at home

The second major group of burns are burns or scalds that occur while distilling spirits (‘schnapps’). Distilling spirits involves obtaining alcoholic beverages through the process of distilling fermented fruit produce. Spirit distillation is a long technological process, consisting of an initial and second brew. During the process, volatile compounds, aldehydes, es-

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Fig. 1 - Tiled stove: resting on the top.

Fig. 2 - Deep dermal burns on the back from lying for prolonged period on a tiled wood burner.

Fig. 3 - Distilling spirits at home (fruit brandy).
tional operations are required later. Burn wounds are in most cases irregularly scattered over the body: in children we see them on the thighs, buttocks and anal/rectal area as a result of falling into a cauldron of hot water (Figs. 5 and 6).

Discussion

Typical burns of a folkloric–ethnographic nature most often require hospital treatment. With regard to incidence rate, they are in decline due to prevention measures and more modern lifestyles. In recent years, we have successfully treated minor burns of this type in out-patient clinics with special patches. In the acute phase they are typically underestimated and, because of irresponsibility, they heal poorly. Patients do not report them until later when complications develop, such as infection, inflammation, swelling or general impairment. In 75% of cases, surgical treatment is required in accordance with the doctrine of primary or secondary necrectomy. Contact burns very often present as subdermal burns: we even recorded a case of carbonification where a patient fell into a stove. Scalds, however, show a clinical picture of superficial dermal partial thickness burns. These involve a high proportion of elderly patients with additional chronic conditions, which further hinders good outcome of burn treatment.

In all cases, an active surgical approach is necessary following the preparation of patients for surgery. Surgical therapy and conservative therapy should be balanced and at a professional level in order to achieve good results. Patients then conclude their hospital treatment with complete physiotherapy and occupational therapy. They are followed up at out-patient check-ups with the general practitioner as well as in the burns clinic.

Conclusion

We have described burns/scalds related to the cultural element of a nation’s habits. With regard to their traditional characteristics and ethnicity, they can be labelled as folkloric burns. The three afore-mentioned and described burns/scalds represent a heterogeneous group, however with some common denominators and clarifications.
All the burns/scalds occur in a home setting, are located in a rural environment, and are seasonal, occurring during the cold months of a calendar year. The burns/scalds are initially underestimated. Patients do not seek medical attention until later: only children are referred on time. Burn wounds are to a large extent infected and poorly managed. This is followed by a long-term surgical or conservative treatment, most commonly in a hospital, less frequently in an out-patient clinic. Long-term, targeted antibiotic protection is necessary, along with anti-tetanus prophylaxis as the burns occurred in a rural environment. In the last decade, we have witnessed a decrease in the number of these accidents, due to new local and national legislation as well as strict European administrative measures.

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