ANIL AGGRAWAL'S
Internet Journal of Forensic Medicine and Toxicology
The world's first online journal devoted entirely to forensic medicine and toxicology · Published 1 January and 1 July

VOL. 16, NO. 1 · JANUARY – JUNE 2015
Downloaded from www.anilaggrawal.com · ISSN 0972-8074 (Online) · https://www.anilaggrawal.com/ij/vol_016_no_001/papers/paper003.html

Malingering Of A Skin Eruption As A Burn Scar: Case Report.

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CITE THIS ARTICLE

Sharma L, Aggarwal K. Malingering Of A Skin Eruption As A Burn Scar: Case Report.. *Anil Aggrawal's Internet Journal of Forensic Medicine and Toxicology* [serial online], 2015; Vol. 16, No. 1 (January – June 2015): [about 12 p]. Available from: https://www.anilaggrawal.com/ij/vol_016_no_001/papers/paper003.html

ABSTRACT

Scars due to thermal or mechanical injuries are commonly encountered by Forensic experts both in the living and the dead. Other conditions giving rise to scarring include vaccination and surgical scars. Scarring caused by various mechanical injuries can be recognized and differentiated from each other. Scarring is also present in certain skin diseases. Scars basically indicate the healing process of an injury and are useful in estimating time/duration of an injury. Misinterpretation of scarring is not uncommon. In the present case, a scar caused by a common skin disease was claimed to be that of torture with a red iron rod. The investigating police brought the victim, a small boy, for examination. No evidence of injury or burn was found on examination. In fact, the case was diagnosed to be of scabies. This is an uncommon situation; though the dermal ailment was common, a small boy using it to evade punishment was something new and disturbing. Protocol of medico-legal investigation of an injury patient with scars should include clinical evaluation and other relevant investigations before arriving at any conclusion on their manner and type as they may turn out to be due to common disease processes.

Keywords: Scars, dermal, misrepresentation

Introduction

"He jests at scars that never felt a wound." [1] William Shakespeare's famous quote holds true for most situations when a scar is encountered in medical practice. Scars (also called cicatrices) are areas of fibrous tissue (fibrosis) that replace normal skin (or other tissue) after injury or disease. A

scar results from the biologic process of wound repair in the skin and other tissues of the body. Thus, scarring is a natural part of the healing process.

Scars have long been used (misused) by criminals for either evading/lessening punishment or for fabricating scars to frame others. Child abuse by burning comprises 6–20% of all child abuse cases, but misdiagnosis may arise in cases of some medical conditions.[2]

The annual incidence of child abuse was estimated to be 2.8 million by the national incidence study conducted in the USA in 1993, which is a two-fold increase compared to 1986. Awareness of child abuse has been increasing since the 1960s. Although most victims of child abuse present with cutaneous lesions, many genuine skin diseases may appear as non-accidental injuries which, if not recognized, may lead to misdiagnosis of child abuse.[3]

Incorrect diagnoses during child abuse evaluations are serious. Because skin lesions are common in abuse, it is important to consider cutaneous mimics of physical abuse.[4]

Case presentation

A 12 year old boy was brought to our facility by the State Crime branch for expert opinion regarding alleged torture marks on his body. The boy had been kidnapped by a gang of criminals who used these children as rag pickers and pickpockets. The boy was caught pickpocketing on a railway station of an adjoining state, whence his parents filed a case of kidnapping and torture against the alleged kidnapper and the case was transferred to the State Crime Branch for investigation.

Clinical & local examination

The initial examination of the boy was carried out in the general hospital of his home district where the examining doctors referred the case to our institution. On local and clinical examination, itchy papular and vesicular lesions, red in colour over the infra-umbilical area, both sides of the midline were noted (Figures 1 &2). The child on inquiry kept repeating that the lesions were due to torture using a hot iron rod. He also kept on scratching the affected area due to intense pruritus. There was no evidence of thermal or mechanical injury at the sites mentioned as injuries in the Medico-legal report. The lesions were diagnosed as scabies of at least 4 weeks duration as evidenced by the popular & vesicular lesions. The skin scrape test was also positive for scabies mites. The itching is due to a delayed hypersensitivity reaction (Type IV) to the mites, their eggs or feces which develops after approximately 4 weeks of the infestation.

Discussion

Several skin lesions may simulate burns. Disruption of the skin layers or its blood supply due to any reason produces similar lesions that mimic a burn injury. Some of these diseases are Stevens-Johnson disease, Lyell's syndrome, erythema multiforme, necrotizing fasciitis, automatic skin necrosis and coagulation disturbances (purpura fulminans, coumarin-induced skin necrosis syndrome), pemphigoid, and subacute cutaneous lupus erythematosus. All of these diseases affect the function and viability of skin and underlying tissues in a way resembling the loss of skin in burns.[5]

Perera conducted a study on 100 medico-legal records of victims of torture examined at the Judicial Medical Officer's Office, Colombo, Sri Lanka between 1998 and 2001 to try to interpret scars of

torture. The objectives of this study were to produce the features of a typical scar of a few selected methods of torture and determine their characteristic distribution. Scars caused by seven selected methods of torture were taken into consideration. They were, assault with both non-pliable and pliable blunt objects, cigarette burns, burns with heated solid objects and molten plastic, ligature application with different forms of suspension and cuts with sharp objects. Total number of scars analyzed in this study was 1846, which included 740 scars of non-pliable blunt weapons, 182 of pliable blunt weapons, 102 of ligature, 59 of molten polythene, 55 of heated objects and 82 of razor blades and knives. Typical scars of each method of torture and their characteristic distribution were determined.[6]

Porzionato reports two cases of dermatological conditions mimicking as child abuse scars. The first concerns a 6-month-old girl was referred to hospital for small round ulcerations on the face and abdomen, resembling cigarette burns which were finally diagnosed as Staphyloccocal scalded skin syndrome. The second case was of a 2-month-old boy hospitalized for erythema, with bullous lesions on the abdomen; a mis-diagnosis of inflicted scalds was made which was later finally ruled out and SSSS diagnosed.[2]

Heider et al[7] have reported a case of pediatric eczema mimicking an abusive burn.

Gruson and Chang report a case of Berloque dermatitis (caused by application of Bergamot containing skin lotions) which resembled child abuse. The child had blistering rash over her face and neck. These lesions were first diagnosed to be due to child abuse but detailed examination revealed them to be lesions of Berloque dermatitis.[8]

Burning with hot objects produces markedly atrophic scars which reflect the shape of the instrument and which are sharply demarcated with narrow hypertrophic or hyper-pigmented marginal zones corresponding to an initial zone of inflammation. This may, for instance, be seen after burning with an electrically heated metal rod or a gas lighter. It is difficult to make a differential diagnosis if many scars are present. Spontaneously occurring inflammatory processes lack the characteristic marginal zone and only rarely show a pronounced loss of tissue.[9]

Conclusion

A full and thorough clinical examination must be carried out in all child abuse cases. Lesions and scars on the body may not always be consequent to torture. Many dermatological conditions may resemble scars. The United Nations has released a manual on the effective investigation and documentation of torture & other cruel, inhuman or degrading treatment or punishment called the Istanbul Protocol.[9] The protocol describes the steps to be taken while examining an alleged case of torture. In the section dealing with medical examination of such cases, stress has been laid to elicit information on physical ailments that the individual believes were associated with torture or ill treatment. Even if the after-effects of acute lesions cannot be seen months or years later, some physical findings may still remain, such as electrical current or thermal burn scars, etc. The examination should include the entire body surface in order to detect signs of generalized skin disease including signs of vitamin A, B and C deficiency, pre-torture lesions or lesions inflicted by torture, such as abrasions, contusions, lacerations, puncture wounds, burns from cigarettes or heated instruments, electrical injuries, alopecia and nail removal. Torture lesions should be described by their localization, symmetry, shape, size, colour and surface as well as their demarcation and level in relation to the surrounding skin. Photography is essential whenever

possible. Ultimately, the examiner must offer an opinion as to the origin of the lesions: inflicted or self-inflicted, accidental or the result of a disease process.

This case was simple in terms of diagnosis, i.e. a common skin disease which was easily diagnosed. The importance of proper clinical evaluation of scars brought for medico-legal examination need not be overemphasized.

Figure 1- the skin lesions later diagnosed as scabies.

Figure2- a close up of the scabies lesions

Figures:



Figure 1- Itchy papular and vesicular lesions seen on the abdomen



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Figures: