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REVIEW

Shaken baby syndrome in Italy: socio-cultural and medico-legal perspective

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Introduction

Shaken baby syndrome (SBS) represents a form of infants' maltreatment brought about by a violent shaking of the child which results in brain trauma associated with neurological sequelae. SBS is also known as abusive head trauma (AHT), being such an occurrence the major cause of death and disability in this setting of patients [1].

Even though there are several risk factors leading to AHT, the more important resides in the considerable discrepancy between head volume and weight compared with the rest of the body mass. In addition, paravertebral musculature and poor control over the head and trunk might increase the level of damage in small children. Finally, fragility and immaturity of the encephalic mass render the brain parenchyma more susceptible to disruption secondary to deficits in axonal myelination [2].

The most common injury dynamic consists in the shaking of the child either being grasped at the chest or from the limbs. The energy resulting from the shaking leads to abrupt brain acceleration/deceleration around the cervical neuroaxis, with subsequent movements, rotations of the encephalic mass, and rebound against the skull base.

SBS incidence ranges from 14 to nearly 40 cases per 100,000 children in the industrialized countries, even if the real consistency of these numbers is very difficult to establish, since many cases do not reach medical observation [3]. Infant's crying represents the main trigger for the abusive conduct, whose implementation is directly proportional to the duration and frequency of crying fits. The link between the cries and the abusive conduct well explicates how AHT mostly occurs between the 2nd week and 6th month of life, a period in which babies cry very frequently and sometimes inconsolably (the so-called purple crying). Reports show how "shaken" babies had histories of prolonged daily cries with a timing shifting between 1.5 and 3 h [4].

Diagnostic criteria and treatment protocol are widely accepted and shared by the neurosurgical community; a detailed description is beyond the scope of this paper [5]. Notwithstanding this agreement, evaluating these children remains a complex task due to clinical and medico-legal implications. A misdiagnosis between accidental and abusive trauma could have serious consequences for the alleged abusers with unneeded loss of legal custody. In addition, the will to defend the child might lead to medical malpractice liability charges as well [6].

In this paper, the authors will focus onto the Italian medico-legal framework regarding SBS to highlight how the social environment shapes the way of proper dealing with this complex matter.

Medico-legal framework in Italy

Italy is a "civil law country" in which broad rules—applied by the judges to the various cases—are in force. On the contrary, in "common law countries," broad rules are derived from specific cases. In Italy, SBS is considered a form of mistreatment and, as such, falls under the provisions by Article 572 of the Criminal Code which contemplates the crime of "Maltreatment against family members or cohabitants," being thus indicatable in the terms of penal prosecution. In addition, there are several aggravating circumstances provided by Art. 61 No. 11 quinques of the Criminal Code, which refers to "having committed the act with abuse of authority or domestic relations."

The nature of the offense, which falls under penal prosecution, also determines a legal obligation for the health care provider. In Italy, whenever a minor showing signs and symptoms suggestive for SBS comes to medical observation, it arises for the health care provider the legal obligation to report it to the competent Judicial Authority (ex art. 365, Criminal code. and art. 331, Criminal Procedure code). The

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physician who fails to recognize or report an SBS case could be liable both to penal prosecution and civil action.

Thus, it seems essential that all health care providers, potentially involved in the management of cases of SBS, are informed and trained on the relative, not-infrequent, occurrence of this form of mistreatment, as well as on the behavioral conduct to be adopted whenever recurrence is suspected.

This statement is consistent with the privileged position of health care providers as a first line of observation and action in SBS cases.

Such a position, given SBS exorbitant cost in terms of public expenditures, psychological burden, and potential legal impacts on health care, is gaining importance each passing day [7].

To lessen the physician burden, most programs in the USA, Europe, and Japan for primary AHT prevention involve informing mothers about the dangers of traumatic violence immediately after delivery [6]. Nonetheless, this approach may not be sufficient to reduce SBS incidence rates. Against this background, the introduction of broader prevention programs that should focus on the education of adolescents (potential babysitters) and young adults is warranted. For example, in Italy, there are several organizations composed of medical and non-medical personnel, such as "Non Scuoterlo!" whose mission is centered on raising awareness on the matter.

Caregiver's abusive behavior

In SBS, a trigger event (i.e., the baby's crying) comes to interact with a state of psychic lability of the caregiver which is secondary to relevant psychophysical stress. The stressor can be

1. Mental disorders of the caregiver (depression in the first place);
2. Alcohol or drug abuse;
3. Unemployment;
4. Previous episodes of violence in the family environment;
5. Poor socioeconomic condition;
6. Physically tiredness of the parent;
7. Loneliness and the sense of frustration resulting from the inability to calm the child.

To contextualize the mechanisms involved in the execution of such criminal conduct, it is paramount to "study" the individual considered in his relations with the natural and social environment.

This comes from the so-called field theory of K. Lewin, according to which behavior (B), even criminal behavior (Cb), can be considered as a function of the environment (E) and the person (P) [8].

However, it is very difficult to make a proper analysis due to the lack of updated statistics on SBS (focusing on cases/year and geographic distribution). The very absence of an Italian SBS distribution chart could be considered a marker of an underdiagnosed problematic and makes even more necessary an analysis of the difficulties in recognizing this condition.

This is of importance since missed SBS diagnosis can have serious consequences both on the psychic development of the growing subject (since the same can be removed, for security reasons throughout the ascertaining period, from the family unit), as well as on the parents. In this regard has been noted how being falsely accused of an alleged SBS can result in actual post-traumatic stress disorder (PTSD) and distrust of health services and authorities [9].

Difficulties in recognizing an abusive behavior

As previously highlighted, the true challenge for the health care provider is to properly differentiate between abusive and accidental trauma since most cases are not straightforward.

The ability to identify or miss the so-called alarm signals is strictly linked to the social environment and cultural perception of the crime. Therefore, a brief analysis of cultural and social factors potentially affecting SBS reporting has been made.

First, in some cultures or geographic areas, "abusive" behaviors are more tolerated since considered part of the normal "educational process," while the very same methods might be considered unacceptable elsewhere. Older generation physicians, in particular, whenever coming from rural or less developed areas, might incur more difficulties in recognizing abusive conduct and thus delaying children referral. Such a fact might be linked with experiencing a world where corporal punishment was socially accepted. Although forbidden, until the 1950s–60 s, punishments in terms of physical abuse were common in Italian rural areas for disciplining children even in schools [10] On the contrary, "generational transition" and modern educational made parents overall less incline to use corporal punishment: in our opinion, this might have changed the perception regarding physical abuse paradoxically increasing the risk of over-diagnosis in case of younger physicians.

Another cause for misdiagnosis resides in social prejudice: even in a high-income country such as Italy, discrimination is still a concern. Health care providers as well as potential witnesses might be biased in considering homeless or immigrants more prone to abusive behavior despite the lack of actual evidence. In this contest, as for the geographical one, the absence of updated analytics on the matter hinders a proper analysis.

Therefore, it is paramount for the physician to be aware of this condition and of the factors which could potentially affect SBS diagnosis.

Conclusion

SBS represents a real challenge for the neurosurgeon both from the medical and legal point of view. The presented analysis of the socio-cultural and legal perspective in Italy highlights how proper training is paramount to offer the abused child the best treatment and the proper legal management.

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Declarations

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