Letters to the Editor

Child-witnessed domestic violence: An epidemic in the shadows

Dear Editor,

Your esteemed journal does great credit to critical care, emergency medicine, surgery, trauma and burn; however, we would like to highlight a very different aspect of injury that occupies a prominent role internationally, but is often ignored; and that is the arena of child-witnessed domestic violence (DV).[1]

A staggering 35-50% of households that experience domestic violence between partners have children.[2] Consequently, there are as many as 275 million children who are exposed to household violence worldwide.[3] Indeed, the above estimate is probably quite conservative because many countries simply do not maintain statistical record in this regard. To add to the true proportion of this problem, children who are exposed to violence in the home are 15 more times as likely to be physically or sexually abused; and this cycle can be continued from generation to generation.[3]
It has been well documented that child-witnessed DV leads to changes in the development of the brain, both anatomically and physiologically, and subsequently impairs affected individuals’ ability to respond appropriately to social situations and impairs their ability to deal with even minor challenges throughout their lifetime.\[^{[4,5]}\] It is critical to understand that child-witnessed DV is a form of child maltreatment. There are two categories of maltreatment: Acts of commission and acts of omission. Both forms of maltreatment result in altered neuroimaging characteristics and physiologic alteration.\[^{[4,5]}\] Acts of commission are acts that are intentionally intended against the child whereas acts of omission involve failed care or neglect. The ensuing difficulties encompass behavioral, social and emotional difficulties, cognitive and attitudinal problems, and other long-term problems or adjustments.\[^{[1]}\]

Neurobiological changes seen among children witnessing DV include abnormalities in the midbrain, the limbic system, cortex, corpus callosum, and cerebellum. Their importance can be outlined as follows. The midbrain is the “relay point” for changes or messaging in sight and hearing. The limbic system (amygdala, hippocampus, hypothalamus) houses the centers for emotion, survival, fear, anger, and pleasure, including sex. It is also important for memory information and storage, as well as being involved in the weight of the individual’s response. The cortex houses executive functions, and the comprehension of consequences, and the corpus callosum allows both sides of brain to communicate in regard to hearing, sight, and cognition. The corpus callosum is the largest concentrated collection of white matter in the brain and connects both cerebral hemispheres thereby facilitating intra-cerebral communication. Finally, the cerebellum is involved in balance, emotion and cognitive development. These structures and the resultant pathways of response are altered following child-witnessed DV.\[^{[4,5]}\]

The primary point to be made to the journal readership, which is comprised of a countless number of caring nursing, trauma, emergency, surgery, critical care, and anesthesia professionals, is that the simple act of witnessing domestic violence is sufficient to cause changes in brain anatomy and thereby signaling pathways that lead to maladaptive responses for the entirety of a child’s life. We believe that child-witnessed DV merits wider consideration for inclusion as a topic in any future conferences that involve trauma and emergency medicine in which our colleagues and readers endeavor to convene.

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