Letter to Editor

Anger- A Ban or Boon: A Physiological Perspective

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Dear Editor,

Anger is the most powerful form of emotional expression across all living beings. The intent of the primary emotion is to convey inconvenience or nonacceptance of a certain behaviour or occurrence; it may also represent buried guilt, inefficiency, and a disguised form of expression that is always considered offensive.[1] Anger is not an emotion to be suppressed but to be aptly regulated and delivered in an admissible manner. It is utmost true that most situations that make people angry have a deep interpersonal component, and especially human beings sabotage the feeling that anger provokes in the receiver as a pseudo-satisfactory model that may invoke completeness. The anger response exhibited may also be a result of a deep-seated psychoneurotic dysfunction wherein the individual loses one's composure or mindedness. Anger may be a contextualized multifaceted construct with subjective, physiological, cognitive, and behavioural components, making it very challenging to define as a single psychobiological phenomenon from both theoretical and practical standpoints.[2]

In the United States, 7.8% of the population experiences frequent, intense, or poorly managed episodes of inappropriate anger.[3] The Gallup Global Emotions Report surveyed individuals in over 140 countries about five negative emotions—pain, worry, sadness, stress, and anger—experienced the previous day, alongside positive experiences. Anger rose by 2% from 2017, reaching a record level of 22%. Armenia ranked highest, with 45% of respondents reporting they felt angry the previous day.[4] Literature search reveals a preponderance of anger prevalence in adolescent males than females, but the factual statement requires a deep inquiry of socio-cultural practices and expression among genders to comprehend the same. Perceived vulnerable situations in different phases of life may be recognised and given every attention. A systematic review on aggression in Indian adolescents found that the prevalence of anger varied widely, ranging between 17.7% and 66.5%.[5] When anger dominates our emotional state, it disrupts the balance between the sympathetic and parasympathetic nervous systems, leading to various neurochemical changes. These alterations can cause cardiovascular irregularities, changes in breathing patterns, sweating, and increased blood flow to the muscles, resulting in heightened physical strength. However, when anger becomes excessive or uncontrollable, it can negatively impact multiple body systems, including the cardiovascular, digestive, immune, and central nervous systems. Over time, these effects may raise the risk of conditions such as hypertension, stroke, heart disease, gastric ulcers, inflammatory bowel diseases, delayed wound healing, and even certain types of cancer. The predominant

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brain areas that correlate with the anger feeling and aggression are the amygdala, superior temporal sulcus (STS), anterior insula, and the anterior cingulate cortex. Serotonin, norepinephrine, epinephrine, and dopamine plays a vital role in regulating mood. Smoothing herbs, including *Bupleuri Radix* and *Cyperi Rhizoma*, were frequently used in animal models and proved to depict anti-anger properties or effects. Drugs like Risperidone, aripiprazole, and lurasidone have considerable effects in reducing anxiety and anger in a heterogeneous group of neuropsychiatric disorders. Cognitive behaviour therapy, psychotherapy, and dialectical behavioural therapy, nevertheless have shown promising effects. Further, recent research had provided promising results using electrical vestibular nerve stimulation in the management of the negative emotions like stress and anxiety. Vestibular stimulation was known to provide calming affects and improve sleep. The primary aim of anger management would be controlled expression, targeted approach to enhance parasympathetic dominance in a wholesome manner for the well-being of the individual the society, and mankind.

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