DOES CHRONIC PAIN EMERGE FROM ACUTE OR WERE YOU BORN THAT WAY?

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The working model in the pain field is that chronic pain emerges subsequent to an acute pain episode. Some mechanisms thought relevant to the development and maintenance of chronic pain develop over time and are not detectable during the acute pain period. Preclinical studies largely support this view. Yet, there are many known risk factors for chronic pain conditions implying a predisposition, or vulnerability, might exist. Such factors might influence the emergence of chronic pain or trigger the condition from the outset of injury. If the latter is the case, it means there is potentially no ‘intervening window’ to stop chronic pain emerging as it already present.

The biological underpinnings that link vulnerability factors to abnormal processing of painful signals are only just beginning to be explored. In my talk, I will discuss the potential mechanisms that have been proposed to underlie vulnerability and resilience towards developing chronic pain and how they relate to the two proposed models: emergence from acute versus chronic from outset. Particular focus will be given to new findings that link chronic pain development with predisposing alterations in the brain/brainstem’s descending pain modulatory system and networks involved with reward, motivation and learning. While research in this area is still in its infancy, a better understanding of how pain vulnerability emerges has the potential to help identify individuals at risk and may open up new therapeutic avenues.

Key Reference: