

意识与麻醉

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DOI: 10.16476/j.pibb.2015.0304

意识可以定义为“个体觉察自我与环境存在的脑功能状态。”也就是说,意识是脑对“存在”的觉察。感知“存在”就是对真实自我和环境的觉察,发生在清醒状态下。对“存在”的觉察是脑的基本功能,也是注意、学习、认知、思维等功能的前提。国际上许多实验室,研究麻醉导致的意识丧失以及麻醉后意识的重新启动,来揭示意识的神经基础。最近, Solovey 等(*J Neurosci*, 2015, **35**(30):10866)发现,不同麻醉药物诱导的脑活动模式不同。如果忽略那些具体活动的特征,意识丧失与皮层动力学稳态之间,确实存在普遍的相关性。以此类比,意识的丧失如同踩下钢琴上的减震器踏板,使琴声消散得更快,而不顾及特定旋律的演奏。如果能够在基础代谢的状态下,即个体刚刚从睡梦中苏醒,觉察到自我和环境存在的时刻研究意识,就可能避免各种麻醉药物对脑活动的干扰。

(Consciousness and anesthesia The definition of consciousness can be described as "a brain basic function that an individual realizes oneself in a real world (environment)." This is to say, consciousness works for human to perceive the reality of oneself and the environment under wakefulness. The perception of the reality is a brain fundamental function for attention, learning, cognition and thinking, etc. So far, many scientific laboratories study human consciousness related with anesthesia because they attempt to reveal how consciousness works when brain reboots awareness. Recently, Solovey and colleagues (*J Neurosci*, 2015, **35** (30): 10866) found that different anesthetics induce different patterns of brain activity. Loss of consciousness is universally and reliably associated with stabilization of cortical dynamics regardless of the specific activity characteristics. To give an analogy, their analyses suggest that loss of consciousness is akin to depressing the damper pedal on the piano, which makes the sounds dissipate quicker regardless of the specific melody being played. Here is a suggestion that the consciousness under the basic metabolism should be observed when a person just awake from asleep state, because s/he just realizes herself or himself in a real world, without disturbance from those of drugs for anesthesia of brain.)