REASONS to BELIEVE

Joseph Bergeron

THE MEDICAL PERSPECTIVE ON THE *Crucifixion*

What Is the Medical Cause of Jesus's Death?

How did Jesus die? In the ancient world, execution by crucifixion involved a slow, agonizing death without obvious injury to vital organs. Jesus's cause of death was crucifixion. However, the physiological process resulting in cessation of life, medically termed the *mechanism of death*, is unclear. Consequently, there hasn't been a clear consensus among physicians as to what physiological mechanism ultimately caused him to die. Some proposed mechanisms of Jesus's death have included cardiac rupture, suffocation, and shock. Some say Jesus didn't die at all, an idea referred to as the "swoon theory." Which of these propositions, if any, provides the most plausible explanation for the mechanism of Jesus's death?

The Swoon Theory

Crucifixion was Rome's most brutal form of execution, the *summum supplicium* (Latin for "the supreme penalty"). Romans considered crucifixion obscene and reserved it for capital criminals, political insurgents, and runaway slaves. Crucifixion of Roman citizens was very rare. Archaeological finds of crucifixion victims are rare since bodies were left on the cross to be eaten by scavenging animals. One could request the body for burial, but authorities required verification of death before the remains were released. Allowing a capital criminal to survive crucifixion would mean death for the soldiers in charge. Thus, it's not possible that Jesus escaped alive.

Cardiac Rupture from Emotional Agony

From a medical perspective, extreme emotional stress simply does not suggest cardiac rupture. Physicians may see cardiac rupture after a heart attack but typically two to three days later, not immediately. In rare cases, a heart attack can cause a hematoma in the cardiac muscle and rupture of the heart more rapidly. However, a massive heart attack cannot be solely attributed to emotional stress. Moreover, a fatal heart attack in a healthy young man like Jesus is implausible. Thus, the proposition that Jesus's heart ruptured from emotional agony has largely fallen out of favor.

Fatal Stab Wound

Did Jesus die when the spear ruptured his heart? Some have concluded that blood flowing from Jesus's side (John 19:34) meant that he was still alive at that moment, the premise being that dead bodies don't bleed. However, this does not follow. A large clot in the heart shortly after death could be unstable and reliquefy. It is noteworthy that a team of soldiers pronounced Jesus dead before plunging a spear into his side (John 19:33). Soldiers on a Roman crucifixion team had credible expertise in pronouncing death. Their own lives

depended on making sure the job was finished. With reasonable certainty, Jesus was dead before the spear entered his chest.

Suffocation

Czech surgeon R. W. Hynek and French surgeon A. Le Bec knew of torture where victims suspended with their arms directly overhead and feet unsupported appeared to suffocate. This observation led them to propose in the early twentieth century that Jesus similarly suffocated. French surgeon Pierre Barbet also believed Jesus suffocated and popularized the theory in his book, *A Doctor at Calvary* (1953).[1] Barbet believed blood flow bifurcation on the arms in the image of the Shroud of Turin supported his supposition that Jesus had to pull himself up in order to breathe. He also believed that crurifragium, the practice of breaking legs (John 19:31), supported suffocation as the mechanism of death, believing victims had to push up with their legs to breathe. However, Dr. Barbet's assumptions about blood flow patterns on the Shroud of Turin and crurifragium seem to be a priori conclusions.

There is little empirical evidence that Jesus suffocated. Suspension torture as described by Hynek, Le Bec, and Barbet is unlike crucifixion in many ways. Suspension torture could cause rapid death, by some reports within three hours. Crucifixion could last for days. Crucifixion reenactment studies have failed to demonstrate difficulty breathing or impaired blood gas exchange. Study participants were also unable to pull up with their arms or push up with their legs.[2] Also, we know from Scripture that Jesus had conversations with Mary, John, and the felons crucified with him while on the cross (Luke 23:39–43; John 19:25–27). The ability to converse while being crucified makes suffocation implausible.

Furthermore, eyewitness descriptions of crucifixion outside the Bible do not support the assumption that victims were suffocating. Literary history from the crucifixion era describes victims speaking (even with a loud voice), insulting, and spitting at onlookers. Such descriptions are inconsistent with suffocation. Philo of Alexandria and Eusebius, both eyewitnesses of crucifixion, believed victims died of torture and starvation. The belief that crucifixion victims were suffocating or had difficulty breathing is conspicuously absent in the writings of ancient eyewitnesses.[3]

Shock and Trauma-Induced Coagulopathy

Traumatic hemorrhagic shock seems to be the best explanation for Jesus's mechanism of death. Shock is the generalized effect of decreased blood perfusion and resultant tissue damage from oxygen deprivation. In trauma, shock is caused by injury and blood loss. Symptoms include weakness, confusion, sweating, feeling clammy, rapid heart rate, and palpitations. Physiological effects include systemic inflammation, tissue ischemia, and an acidic shift in blood pH (acidemia). Unchecked, the effects of shock can be progressive and unrecoverable even with the best of treatment.

Jesus's beatings were extraordinary. He was first beaten at the home of Caiaphas the high priest. Roman soldiers applied a second beating, which would have been particularly harsh due to Roman antisemitism and finding Jesus guilty as a political insurgent; namely, King of the Jews. Soldiers used a whip (flagellum) having leather strips with dumbbell-shaped pieces of lead tied in the ends to act as cutting implements. Scourging caused blunt trauma and lacerations from head to toe. Such beatings likely rendered Jesus unable to carry the horizontal section (patibulum or crossbar) of the cross, estimated to weigh about 60 pounds, to the execution site. Jesus seems to have been progressing into shock before he reached the crucifixion site.

Trauma-induced coagulopathy is a potential complication of shock where the blood loses its ability to clot. This can have a progressive, snowball effect. Precipitating factors include tissue injury with blood loss, decreased core body temperature (hypothermia), and decreased blood pH (acidemia). The severity of his beatings and cool ambient temperatures (John 18:18) set the stage for coagulopathy to develop.

Pathophysiological processes were occurring in Jesus's body that surpassed what was happening to the others crucified that day. The others were still alive after Jesus was pronounced dead by Roman soldiers. Pilate himself was surprised at how quickly Jesus died (Mark 15:44)—six hours, unusually rapid for a method of execution that could last for days. Coagulopathy may explain why Jesus succumbed to shock so rapidly. Coagulopathy may also explain why blood poured from his chest wound after he had already died.

The Greater Meaning

Jesus spoke of his death at the Last Supper, a Passover Seder. There he lifted the ceremonial Cup of Blessing (also called the Cup of Redemption) and stated, "This cup is the new covenant in my blood" (Luke 22:20). Jesus was pointing to Jeremiah's prophecy of a new covenant when God would change the hearts of his people and forgive their sins (Jeremiah 31:31–34). This pivotal event in human history—a new covenant between God and mankind—was inaugurated at Jesus's crucifixion. God's relationship with humanity was redefined. Forgiveness and spiritual transformation were available to all who would believe.

Why does the mechanism of Jesus's death matter? Jesus appeared to make a medical statement at the Last Supper. Holding the cup, he said, "This is my blood of the covenant, which is poured out for many for the forgiveness of sins" (Matthew 26:28). Jesus seems to have been intimating that the mechanism of his death would be exsanguination (blood loss), namely by traumatic hemorrhagic shock. From a medical standpoint, the gospel descriptions of Jesus's torture and death seem credible. This analysis offers intrinsic evidence of the authenticity of the gospel accounts of Jesus's death.

Resources

- Joseph W. Bergeron, *The Crucifixion of Jesus: A Medical Doctor Examines the Death and Resurrection of Christ* (Rapid City, SD: Crosslink Publishers, 2019).

- Joseph W. Bergeron, "The Crucifixion of Jesus: Review of Hypothesized Mechanisms of Death and Implications of Shock and Trauma-Induced Coagulopathy," *Journal of Forensic and Legal Medicine* 19, no. 3 (2012): 113–116, doi:10.1016/j.jflm.2011.06.001.

Endnotes

1. Pierre Barbet, *A Doctor at Calvary: The Passion of Our Lord Jesus Christ as Described by a Surgeon* (Fort Collins, CO: Roman Catholic Books, 1953).

2. Frederick T. Zugibe, "Death by Crucifixion," *Canadian Society of Forensic Science Journal* 17, no. 1 (1984): 1–13, doi:1080/00085030.1984.10757355; see also, Frederick T. Zugibe, *The Crucifixion of Jesus: A Forensic Inquiry* (New York: M. Evans and Co., 2005), 116–119.

3. Thomas W. McGovern, David A. Kaminskas, and Eustace S. Fernandes, "Did Jesus Die by Suffocation? An Appraisal of the Evidence," *The Linacre Quarterly* (August 22, 2022): doi:10.1177/00243639221116217.

Do Hallucinations Explain Jesus's Resurrection?

Were the disciples hallucinating when they met Jesus after his crucifixion? Do psychiatric disorders explain the disciples' belief in Jesus's resurrection?

Jesus's bodily resurrection after death by crucifixion is a foundational belief of orthodox Christianity. All of Jesus's friends watched his ignominious and grisly death (Luke 23:49). Jesus's disciples and many of his friends met him after his resurrection, too many to easily explain away (1 Corinthians 15:3–8). The disciples unanimously believed Jesus had resurrected. Could their belief in Jesus's resurrection be the after-effect of hallucinations?

As a naturalistic alternative for the biblical accounts of the resurrection, some skeptical scholars propose that the disciples' post-crucifixion meetings with Jesus were actually various kinds of hallucinatory psychological phenomena. Collectively, such explanations have become known as the hallucination hypothesis for Jesus's resurrection.

The hallucination hypothesis has significant medical implications, yet its main proponents are critical New Testament scholars, not physicians. Consequently, books and articles advocating the hallucination hypothesis have not been subjected to the specialized readership of medical peer review. As the majority of proponents of the hallucination hypothesis are outside the disciplines of medical education and healthcare practice, an examination of the hallucination hypothesis from a medical perspective certainly seems warranted.

What Are Hallucinations?

A hallucination is an experience involving one or more of the five senses in the absence of external stimuli that the conscious mind perceives as real.[1] Most proponents of the hallucination hypothesis overlook the fact that hallucinations are symptoms of an underlying illness. Hallucinations generally arise from three disease categories: (1) psychophysiological causes related to an alteration of function or structure in the brain (a brain tumor, for example); (2) psychobiochemical causes due to alteration of chemical neurotransmitters within the brain (for example, delirium tremens in alcohol withdrawal); or (3) psychodynamic causes, namely the intrusion of psychiatric illness into the conscious mind.[2]

But could Jesus's disciples have all simultaneously suffered severe medical or psychiatric illness? This contention defies reason and probability. In Jesus's time people with psychiatric illness were ostracized and considered incompetent or demonized.[3] Could

a group of people with uncontrolled psychiatric illness have deployed such a rapid and successful expansion of Christianity in the first century? This hardly seems plausible.

It must not be overlooked that hallucinations are private experiences occurring only in the milieu of the individual's brain.[4] No two hallucinations are identical from person to person. As such, the hallucination hypothesis offers no explanation for group encounters with the resurrected Jesus.

Mass Hysteria

Does mass hysteria explain group meetings of the disciples with the resurrected Jesus? In modern medical parlance, mass hysteria is more precisely termed mass sociogenic illness. This condition describes individuals within a group who have similar simultaneous collective psychological experiences, even visionary experiences in rare cases. The group dynamic is characterized by a heightened sense of social excitement in the context of unique cultural or social expectation.[5] But Jesus's disciples don't fit that profile. They weren't expecting his resurrection. They were frightened and in hiding (John 20:19).

It's noteworthy that no two persons in a group experiencing mass sociogenic illness have identical visual hallucinations.[6] This isn't surprising because hallucinations are private experiences within the individual's mind. Thus, mass sociogenic illness fails to offer a plausible explanation for group meetings of the disciples with the resurrected Jesus.

Conversion Disorder

In Freudian psychoanalysis, subconscious conflicts are sometimes "converted" into neurological symptoms, hence the term conversion disorder.[7] Conversion disorder symptoms can be profound and can include blindness or paralysis. Symptoms are psychiatric, however, and lack identifiable pathophysiological causation.[8]

Conversion disorder is twice as likely to affect women than men and is often associated with other psychological comorbidities. It results from a psychologically painful experience. For example, a mother who finds her child has drowned may become blind. People with conversion disorder show a peculiar lack of distress about their condition, a demeanor sometimes called la belle indifference. Nevertheless, conversion disorder has a generally positive prognosis. Neurological symptoms most often subside in days to a few weeks.[9]

According to psychologist Carl Jung, the apostle Paul had subconsciously been a Christian for some time but had repressed his true faith until it broke into his conscious mind, manifesting in a vision of Jesus followed by psychogenic (psychological-in-origin) blindness. Jung believed that Paul's transient blindness after his Damascus road experience with Jesus (Acts 9:3–9) was a conversion disorder.[10]

Jung's idea that Paul simultaneously experienced visual hallucinations and conversion disorder is antiquated. Visual hallucinations are not part of the current clinical pathognomy of conversion disorder.[11] To propose that Paul had hallucinations and conversion disorder would require dual diagnoses.

Also, Paul doesn't fit the profile of someone suffering from conversion disorder. He had no misgivings or psychological turmoil about persecuting Christians (Galatians 1:13–14). And he was a rising star in the Hebrew religious world of his day (Philippians 3:4–6, Galatians 1:14). Had Paul merely experienced a conversion disorder, it would be expected that he would resume his usual life activities once the symptoms had subsided.

Even skeptical scholars concede that Paul believed Jesus appeared to him bodily.[12] This would be a peculiar lifelong belief had he merely experienced a conversion disorder. Paul made a lasting 180-degree change after he met Jesus. He became the most prolific proponent of Christianity to the Gentile world in his time, despite severe persecution and eventual martyrdom. He relentlessly preached of Jesus's messiahship and resurrection from the dead.[13] Paul's radical, enduring change, prolific doctrinal writing, and Christian advocacy are inconsistent with the proposition that he experienced conversion disorder.

Bereavement

Hallucinatory symptoms during bereavement are common, most often experienced by a widowed spouse. Unlike hallucinations, bereavement experiences are psychologically mediated but are not considered pathological (related to disease). The most common experience is a sense of closeness with the deceased.[14] Auditory and visual experiences can occur but are less common.

The rarest type of bereavement experience is visual apparitions. Visual experiences are reported to range from 4% or less but up to 10.8% in spouses suffering severe grief.[15] Visual apparitions are typically noninteractive. Attempting to interact with an apparition causes it to disappear.[16] Visual bereavement experiences would be doubly atypical among friends and disciples. Grieving the loss of a friend and mentor is dissimilar to the grief a widowed spouse may experience.

A widowed spouse is typically reluctant to disclose such experiences. It is noteworthy that bereavement experiences neither cause the grieving spouse to believe the deceased had resurrected nor inspire them to make any particular life change. Bereavement experiences often diminish in frequency over time but can persist in some cases for months or years. Unlike bereavement experiences, Jesus's disciples saw him only within the forty days after his resurrection.[17]

Meetings with Jesus included person-to-person visits, group and large crowd meetings,

physical contact, eating together, and detailed conversations.[18] Those who met him were convinced that he had resurrected. The disciples' meetings with Jesus are simply unlike the psychological experiences reported in bereavement literature.

Hallucination Explanations Unconvincing

Jesus's disciples experienced something that made them believe he had resurrected from the dead. The effect on each was profound and lifelong. Proponents of the hallucination hypothesis seem unaware of the psychiatric and neurophysiological pathologies that cause hallucinations. The disciples' belief in Jesus's resurrection cannot be reasonably explained away as the sequelae (aftereffects) of psychiatric illness. Moreover, psychological phenomena offer no plausible explanation for the group meetings between the resurrected Jesus and his disciples. The hallucination hypothesis fails to offer any tenable explanation for the disciples' belief in Jesus's resurrection.

Resources

- Joseph W. Bergeron and Gary R. Habermas, "The Resurrection of Jesus: A Clinical Review of Psychiatric Hypotheses for the Biblical Story of Easter," *Irish Theological Quarterly* 80, no. 2 (2015), 157–172, doi:10.1177/0021140014564555.

- Joseph W. Bergeron, *The Crucifixion of Jesus: A Medical Doctor Examines the Death and Resurrection of Christ* (Rapid City, SD: Crosslink Publishers, 2019).

Endnotes

1. Benjamin J. Sadock, Virginia A. Sadock, and Pedro Ruiz, *Kaplan and Sadock's Synopsis of Psychiatry, Behavioral Science/Clinical Psychiatry*, 11th ed. (Philadelphia: Wolters Kluwer, 2015), 452–453.

2. Bryan Teeple, Jason Caplan, and Theodore Stern, "Visual Hallucinations: Differential Diagnosis and Treatment," *Journal of Clinical Psychiatry* 11, no. 1 (2009): 26–32, doi:10.4088/pcc.08r00673.

3. As an example, some Jews referring to Jesus stated, "He is demon-possessed and raving mad. Why listen to him?" (John 10:20). See also MJL administrative staff writer, Judaism and Mental Illness, myjewishlearning.com/article/judaism-and-mental-illness/, accessed September 18, 2020.

4. Joseph W. Bergeron and Gary R. Habermas, "The Resurrection of Jesus: A Clinical Review of Psychiatric Hypotheses for the Biblical Story of Easter," *Irish Theological Quarterly* 80, no. 2 (2015): 161, also fn 16.

5. Erica Weir, "Mass Sociogenic Illness," *Canadian Medical Association Journal* 172, no. 1 (2005): 36, doi:10.1503/cmaj.045027.

6. Bergeron and Habermas, "The Resurrection of Jesus," 161–162, also fn 16 and 19. See also Jake O'Connell, "Jesus' Resurrection and Collective Hallucinations," *Tyndale Bulletin* 60 (2009): 69–105, doi:10.53751/001c.29267.

7. Josef Breuer and Sigmund Freud, *Studies in Hysteria*, trans. James Strachey (New York: Basic Books, 1957), 206. Also, it should be noted that conversion disorder is a form of mental illness and is unrelated to religious conversion.

8. Colm Owens and Simon Dein, "Conversion Disorder: The Modern Hysteria," *Advances in Psychiatric Treatment* 12 (2006): 152–157. See also Matthew Allin, Anna Streeruwitz, and Vivienne Curtis, "Progress in Understanding Conversion

Disorder," *Neuropsychiatric Disease and Treatment* 1, no. 3 (September 2005): 205–209. Benjamin J. Saddock and Virginia A. Saddock, *Kaplan and Saddock's Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry* (Philadelphia, PA: Lipincott Williams and Wilkins, 2003), 649–650.

9. Allin, Streeruwitz, and Curtis, "Progress in Understanding Conversion Disorder," 205–209. See also Saddock and Saddock, *Kaplan and Saddock's Synopsis of Psychiatry*, 649–650.

10. Carl G. Jung, *Contributions to Analytical Psychology*, vol. 9 (New York: Harcourt, Brace, 1928), 258–260.

11. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. (Washington, DC: American Psychiatric Association Publishing, 2013), 319.

12. Bergeron and Habermas, "The Resurrection of Jesus," 163, also fn 25.

13. Paul personally described his many persecutions (2 Corinthians 11:23–27). Paul's widespread and persistent preaching was well known in the first century. See First Clement 5:5–7, earlychristianwritings.com/text/1clement-hoole.html, accessed September 21, 2020. The exact date of Paul's death is not known, but it is traditionally held that he was beheaded during Nero's rulership, bibleresearchtoday.com/2019/02/27/the-death-of-the-apostle-paul/, accessed September 21, 2020.

14. W. Dewi Rees, "The Hallucinations of Widowhood," *British Medical Journal* 4 (1971): 37–41.

15. Naomi M. Simon et al., "Informing the Symptom Profile of Complicated Grief," *Depression and Anxiety* 28, no. 2 (February 2011): 118–126, doi:10.1002/da.20775.

16. Dewi Rees, *Pointers to Eternity* (Talybont: Y Lolfa, 2010), 176.

17. Gerald O'Collins, *Christology: A Biblical, Historical, and Systematic Study of Jesus* (Oxford: Oxford University Press, 2009), 99.

18. Luke 24:13–31; John 20:19–23; 20:26–29; 21:1–16, Luke 24:34; Acts 1:3; 1 Corinthians 15:3–8.

About the Author

Joseph W. Bergeron, MD, is a specialist in physical medicine and rehabilitation with decades of experience evaluating musculoskeletal injury, including medical legal analysis. Dr. Bergeron's practice experience provides unique insight on Jesus's cause of death and scrutiny of hallucination hypotheses seeking to explain away his resurrection. Dr. Bergeron speaks at conferences, churches, and universities on medical perspectives of the crucifixion and resurrection of Jesus Christ.

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For inquires, contact us via:
818 S. Oak Park Rd.
Covina, CA 91724
(855) REASONS • (855) 732-7667
ministrycare@reasons.org