MAYO CLINIC

SPECIAL ARTICLE

The "Delivery" of Adam: A Medical Interpretation of Michelangelo

Stefano Di Bella, MD; Fabrizio Taglietti, MD; Andrea Iacobuzio, DVM; Emma Johnson, MBBS; Andrea Baiocchini, MD; and Nicola Petrosillo, MD

Abstract

This article describes what we believe to be the key to interpreting the concept represented by Michelangelo's painting the *Creation of Adam*. This fresco, one of his most famous masterpieces, is situated in the heart of the Sistine Chapel and is viewed by millions of people every year. A man of many talents, Michelangelo's proficiency in anatomical dissection is reflected in his artwork. As such, analyses of hidden meanings in this fresco have been ascribed, including the concept of the "Brain-God." However, we see a postpartum uterus and adjacent anatomy, justifying our interpretation that Michelangelo was depicting something far more fundamental: the birth of mankind.

 ■ Mayo Clin Proc. 2015;90(4):505-508

Michelangelo di Lodovico Buonarroti Simoni, commonly known as Michelangelo, was an Italian sculptor, painter, architect, poet, and engineer of the High Renaissance. He was born on March 6, 1475. He died in 1564 at the age of 88 years.

Michelangelo is widely considered an inimitable genius of the 16th century, and his world-renowned masterpiece painted onto the ceiling of the Sistine Chapel attracts millions of visitors a year to the Vatican. This extraordinary creation was commissioned by Pope Julius II and took Michelangelo 4 years to complete (1508-1512). However, despite being one of his most famous pieces, Michelangelo initially refused to accept this invitation because he considered himself an inadequate painter for such a vast and complex work: "Michelangelo…, believing the vaulting of that chapel to be a great and difficult labour, and considering his own want of practice in colours, sought by every means to shake such a burden from his shoulders, and proposed Raffaello for the work. But the more he refused, the greater grew the desire of the Pope, who was headstrong in his undertakings."[1, p28]

Interpretation of a historical work is challenging because contemporary context is difficult to reproduce, and we believe that this fresco is no exception. The "heart" of the Sistine Chapel reveals the *Creation of Adam*, one of the best-known and most reproduced works in the history of art. The depiction of the Hand of God giving life to Adam is thought to be purposefully central, representing the *primum movens*: the creation of the human being. Initially commissioned to depict the Apostles, Michelangelo negotiated more freedom and went on to illustrate a plethora of biblical scenes. How far he extended such freedom is fervently debated, and armed with the knowledge of Michelangelo's enduring interest in anatomy and the human body, many medically orientated, adjunctive interpretations of these scenes exist.[2] Justified herein, we see God situated in a postpartum uterus while Adam lies on a woman's torso. For years, varying medical interpretations of the imagery depicting the *Creation of Adam* have been proposed. For example, nephrologists can detail the sections that resemble kidneys, and historical evidence of Michelangelo's struggle with renal stones only adds to this curiosity and wonderment.[3,4]

The most common interpretation, however, is the concept of the "Brain-God," which is based on the similarity of the shape painted behind the figure of God with that of a human brain.[5,6] However, in our opinion, this interpretation does not marry with the painting title, and the proposed significance remains to be fully explicated.

Other suggestions have been made, and in 1955, Adrian Stokes, a prolific art historian, wrote: "…on the Sistine ceiling the anomaly of the issue of Eve from Adam's side, beckoned forth by the Almighty midwife, dissolves; and we realize with awe that the keen, the sublime,

From the 2nd Infectious Diseases Division, National Institute for Infectious Diseases, "Lazzaro Spallanzani," Rome, Italy (S.D.B., F.T., A.B., N.P.); freelance anatomical painter, Muggiò, Italy (A.I.); and Department of Molecular Biology and Biotechnology, University of Sheffield, Sheffield, United Kingdom (E.J.).

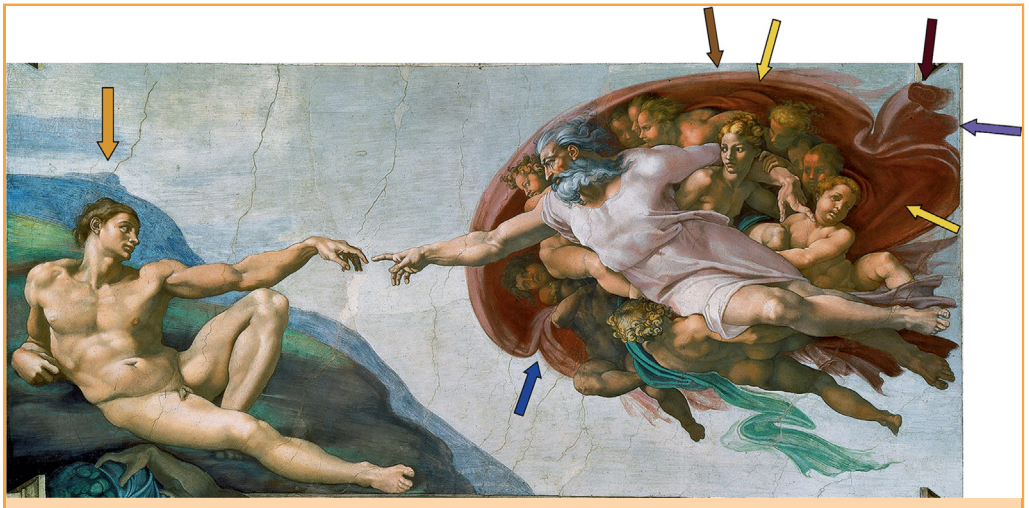

FIGURE 1. The *Creation of Adam* (Sistine Chapel).

God the Father of the Creation of Adam controls about him an uterine mantle filled with attendants who clamber close, souls yet to be born, attributes as yet of his own essence."[7, p89]

This obstetric-themed context was unique, but more recently, a group of Italian scientists proposed a congruous obstetrical interpretation of the painting.[8] We support their conjecture about the true significance of the painting but seek to further the theory by offering additional pieces to such a captivating puzzle.

We believe that in such a great artist's painting, nothing is casual: everything has its specific place and explanation. From this premise and with the help of anatomical drawings, we expose, step by step, what we believe is the real interpretation of this inspired centerpiece (Figure 1).

1. The first clue to understanding the central section of the fresco is the small oval shape in the right upper part of the painting (burgundy arrow). In fact, it appears to be like the stalk of an apple (the apple would be the large dark red oval [brown arrow]). Looking with an anatomist's eye, one can recognize the small oval as a section or cut of a hollow pipe (eg, a large artery). However, we see this hollow organ as the fallopian tube.
2. The color and shape of the large oval (brown arrow) could resemble that of a heart chamber or a cloak. However, looking at it carefully, one can perceive that even this is a hollow organ. The large oval is the uterus, but not one under normal physiologic conditions; rather, it is a postpartum uterus.
3. The folds of the large oval (yellow arrows), resembling those of a cloak, are the folds of the mucosa of the uterus in the postpartum period. The mucosa of the uterus in normal physiologic conditions has no folds. These folds are apparent only after delivery due to the subsequent retraction of the uterine muscle. Furthermore, the dark red color of the inner aspect of the large oval is typical of the endometrium after birth.
4. In the lower part of the large oval there is a ruche (blue arrow), resembling the fold of a fabric. This fold appears to bend toward the inner part of the large oval. This is the uterine cervix.
5. Under the small oval there is an unrecognizable stain (purple arrow). This red spot appears like a "fish out of water," perhaps looking like a doodle or an attempt to retouch something that was not understood during the several restorations of the Sistine Chapel.

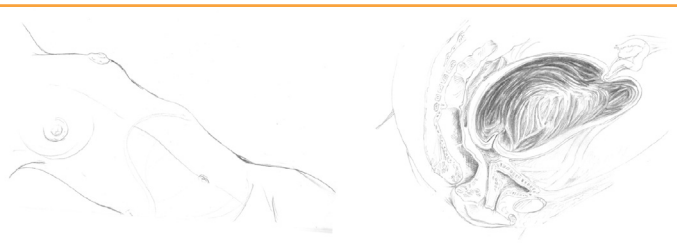

FIGURE 2. Drawings: female body and uterus.

Mayo Clin Proc. ■ April 2015;90(4):505-508 ■ http://dx.doi.org/10.1016/j.mayocp.2015.02.007
www.mayoclinicproceedings.org

It took time and thought for us to understand what this spot represents. Its position under the tube and its shape make it clear that it is the ovary. It is likely that the original painting had more shades in the image but that these were lost with the restoration because the restorers were not aware of what that stain represented.

6. Adam seems to be resting on what looks like a rock. In ancient times, the rock also had the meaning of a generating mother (eg, many divinities, such as Mithra, are born from a rock). However, behind the rock there is a background of different color (blue) that does not seem connected to the rock. Looking carefully one can see a female body outline, with the nipple just above Adam's head (orange arrow).
7. With reference to the female form, the position of the uterus lies directly above what would be the lower abdomen of the female, as if projecting the uterus to its correct anatomical place.

To emphasize our imagery, we present single and overlaid drawings in Figures 2, 3, and 4, courtesy of the anatomical painter Andrea Iacobuzio. It is, of course, no secret that our minds are powerful and may naturally associate even unrelated images, yet the incredible similarities between the painting and the anatomical details are striking.

Michelangelo, and, indeed, his talented contemporary Leonardo da Vinci, had early experiences in anatomical dissection. Dissection was previously forbidden by the Church, but in the late 15th century, Pope Sixtus IV granted permission for educational purposes. While Leonardo da Vinci studied corpses at the Hospital of Santa Maria Nuova, Michelangelo, who was 23 years younger, practiced anatomy on the corpses in Santo Spirito, thanks to a friendship with the church prior.[9] In the pre-antibiotic era, peripartum or postpartum sepsis leading to death was common. Although accurate records of mortality secondary to childbirth are not available before the 19th century, 5 to 6 maternal deaths per 1000 births is no doubt a conservative estimate.[10]

Compared with the medical students of today, therefore, Michelangelo had plentiful opportunity to examine such pathology. Giorgio Vasari, a historian of that time, writes about Michelangelo's experiences:

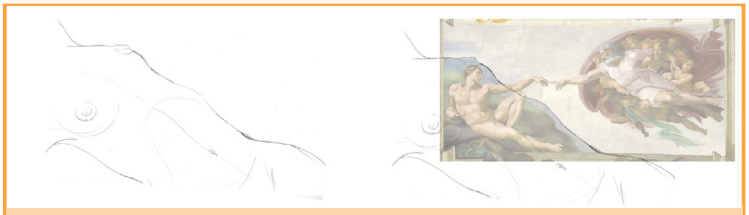

FIGURE 3. Overlapping images: female body.

"Moreover, in order to be entirely perfect, innumerable times he made anatomical studies, dissecting men's bodies in order to see the principles of their construction and the concatenation of the bones, muscles, veins, and nerves, the various movements and all the postures of the human body; and not of men only, but also of animals, and particularly of horses, which last he much delighted to keep. Of all these he desired to learn the principles and laws in so far as touched his art, and this knowledge he so demonstrated in the works that fell to him to handle, that those who attend to no other study than this do not know more."[1, p104]

CONCLUSION

The Sistine Chapel is arguably the most visited room in the world. With mass global tourism growing every year, some 5 million people, and up to 20,000 per day in summer, enter the Chapel and crane their necks upward. So one may wonder: Why, despite millions of people having looked at the painting, has this imagery not been "seen" before? The inspirational artists of the Renaissance embraced a 360° culture, yet art academics and historians have little medical or anatomical knowledge and perhaps may interpret the paintings according to their own viewpoints. Indeed, even an expert pathologist might not immediately identify the uterus owing to its unusual quasi-sagittal section and the

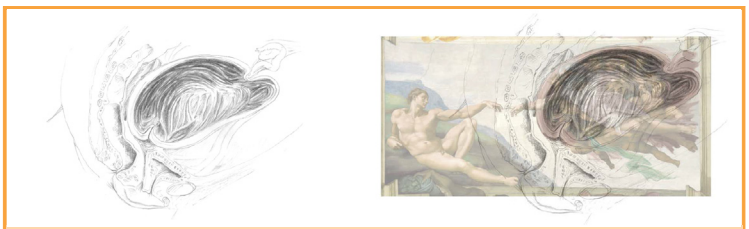

FIGURE 4. Overlapping images: uterus.

particular paraphysiologic situation, that is, the postpartum condition. Usually, anatomists and medics alike study only the normal or the pathologic uterus in standard sections. Crucially, however, irrespective of the origin of the various interpretations, it is paramount that we purposefully adopt the attitude of the Renaissance period, a time when those most interested in human anatomy were, of course, the artists.

We believe that our interpretation considers clues that have been overlooked in other studies. Scrutinizing this important piece from an alternative perspective, pursuing the mindset of man living through the Renaissance, allows us to present this view. The "rebirth" of our contemplations permits a logical and plausible explanation for this remarkable pièce de résistance.

ACKNOWLEDGMENTS

In memory of Prof Andrea Tranquilli. We also thank Prof Monica Emanuelli for her kind help in reviewing the manuscript.

Correspondence: Address to Stefano Di Bella, MD, 2nd Infectious Diseases Division, National Institute for Infectious Diseases, "Lazzaro Spallanzani," Via Portuense 292, 00149, Rome, Italy (stefano932@gmail.com).

REFERENCES

1. Vasari G. *Lives of the Most Eminent Painters, Sculptors, and Architects*. London, England: Macmillan and the Medici Society; 1912; volume IX:1-143.
2. Eknoyan G. Michelangelo: art, anatomy, and the kidney. *Kidney Int*. 2000;57(3):1190-1201.
3. Strauss RM, Marzo-Ortega H. Michelangelo and medicine. *J R Soc Med*. 2002;95(10):514-515.
4. Steinberg L. Michelangelo and the doctors. *Bull Hist Med*. 1982; 56(4):543-553.
5. Meshberger FL. An interpretation of Michelangelo's Creation of Adam based on neuroanatomy. *JAMA*. 1990;264(14): 1837-1841.
6. Paluzzi A, Belli A, Bain P, Viva L. Brain "imaging" in the Renaissance. *J R Soc Med*. 2007;100(12):540-543.
7. Stokes A. *Michelangelo: A Study in the Nature of Art*. London, England: Tavistock Publications; 1955.
8. Tranquilli AL, Luccarini A, Emanuelli M. The creation of Adam and God-placenta. *J Matern Fetal Neonatal Med*. 2007;20(2):83-87.
9. Benedetti A. Michelangelo studia anatomia in Santo Spirito. https://curiositasufirenze.wordpress.com/2012/07/16/michelangelo-studia-anatomia-in-santo-spirito/. Accessed January 5, 2013.
10. Loudon I. Deaths in childbed from the eighteenth century to 1935. *Med Hist*. 1986;30(1):1-41.