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Images of the human placenta

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On the Cover

Capturing the complexity of the human placenta (both structure and function) with an image has been a formidable challenge. Early representations focused on the mythological or spiritual attributes given to the placenta by ancient cultures - the oldest widely known image dates back to 3400 BC and was found on an ancient Egyptian ceremonial stone at Hierakonpolis, one of the largest urban centers and excavation sites along the Nile River.

Figure 1 depicts a Pharaoh preceded by attendants in a ceremonial procession, holding standards—the fourth from the right was interpreted by Murray, a scholar in Egyptian culture, as representing the Royal Placenta, also considered “second soul”, or the Pharaoh’s secrete helper.^{1,2} In the Old Testament, the organ was referred to as the “Seat of the External Soul” or the “Bundle of Life.”³ Other cultural interpretations of the placenta have included its role as a companion to the child or another soul that can serve to warn the child of danger or act as a conscience.²

Despite awareness of the organ for millennia as the afterbirth, the term “placenta” (from the Latin, meaning “flat cake”, or Greek “plakoenta”) was first used by Matteo Realdo Colombo (1516e1559), a Professor of Anatomy and Surgery at the University of Padova, and published in his landmark contribution *De re Anatomica* in 1559.⁴

The *American Journal of Obstetrics & Gynecology* has published seminal papers and images on the anatomy, physiology, pathology, and establishment of the circulation of the human placenta.^{5–17} Figure 2 shows one of the most informative illustrations of the anatomy and circulation of the human placenta by Uwe E. Freese.¹¹ This rendition was based on a number of original research papers published in AJOG by pioneers in the field of placentology.

For the cover of this special supplement, we chose an artistic rendition of the placenta (Figure 3) by a renowned scientist and pioneer in placentology, Dr Susan Fisher. This striking image conveys the beauty of this fascinating organ and the mysteries that are yet to be unraveled.

This supplement of the human placenta was produced to highlight important developments in the understanding of the biology and clinical aspects of this organ. We are grateful to the authors for their exceptional contributions; the reviewers for providing constructive and timely feedback; Elsevier, our publisher, for funding the special supplement; and our team of Editorial Managers, graphic designers, and production team for the effort made to bring this supplement to fruition. Our hope is that this special issue will inform our readers and will promote research in the human placenta.

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Figure 1.

The Narmer Palette (*Great Hieakonpolis Palette; material: Siltstone; present location, Egyptian Museum Cairo, Egypt*) is one of the most famous archeological findings in Egypt and dates from about 3400 BC. On the image, a pharaoh is preceded by a priest and 4 attendants. The fourth from the right carries a standard with a bi-lobe structure interpreted to be the placenta with its umbilical cord.

Source: http://theegyptianmuseum.blogspot.com/2013/04/narmer-palette_14.html.

Figure 2.

A schematic representation of the uteroplacental circulation. The spiral arteries, cotyledons, chorionic plate and, basal plate are illustrated. Reprinted, with permission, from Freese UE.

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Figure 3.
Ink blot of a human placenta and umbilical cord. Kindly provided by Dr Susan Fisher.