A new diagnosis for Frida Kahlo's infertility
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Frida Kahlo's many haunting self-portraits have been studied by experts for decades, have attracted worldwide attention and have sold for millions of dollars at auction. Yet, despite the fact that Kahlo's work focuses largely on anatomy and failed reproduction attempts, relatively little attention has been paid to Kahlo's own body and infertility.

Intrigued by the messages manifested in Kahlo's work and surprised by the apparent lack of interest by scientists in Kahlo's clinical condition, Fernando Antelo, a surgical pathologist at the Harbor UCLA Medical Center, set out to reassess the condition that caused Kahlo's infertility and inspired some of her greatest pieces.

"While art historians and journalists have written extensively on Kahlo's life and artwork, there is a lack of scientific comment by physicians - who have written only a handful of papers on her health," Antelo explained. "To add a twist of irony, none of these medical papers have focused on Kahlo's infertility."

Antelo recently conducted a review of both Kahlo's medical history and her artwork, and on Sunday, April 22, he presented findings at the American Association of Anatomists Annual Meeting indicating that Kahlo's infertility was due to a condition known today as Asherman's syndrome.

"As a teen, Kahlo was in a streetcar accident during which a metal handrail penetrated her abdomen. "The trauma severely damaged her skeletal framework and internal organs - including erman's syndrome was first described in 1894. Today, in most cases, it occurs as a result of a common minor surgical procedure - known as dilation and curettage - to clear out the uterine cavity after childbirth, miscarriage or abortion.

"When the basal layer of the endometrium undergoes significant damage, scar tissue forms within the uterine cavity and represents the manifestation of Asherman's syndrome," Antelo said. Asherman's syndrome can cause menstrual abnormalities, including painful cycles, infertility or miscarriage.

Other causes for Asherman's syndrome include pelvic surgeries, such as Cesarean sections and the removal of fibroid tumors from the uterus, use of intrauterine devices, pelvic irradiation, schistosomiasis and genital tuberculosis.

The diagnosis

If you search the scientific literature database maintained by the National Library of Medicine, known as PubMed, you will find only 16 studies about Kahlo. The first was published in 1989 - 35 years after her death at the age of 47. While these papers directly discuss her orthopedic, neurological and chronic-pain issues, none of the papers investigate the basis of her infertility, Antelo emphasizes.

Kahlo's history of uterine trauma and subsequent obstetric record supports a diagnosis of Asherman's syndrome, Antelo said. "Specifically, the penetration of the streetcar handrail through Kahlo's adolescent body caused trauma to the uterus - critically injuring the endometrial lining and resulting in significant scar formation within the uterine cavity. The scar formation in her uterine cavity is theorized to have played a role in the continual miscarriages and pregnancy failures that Kahlo experienced," he said.

Kahlo experienced numerous miscarriages and at least three therapeutic abortions. Her paintings contain various images of reproduction and fertility - from scientifically accurate depictions of reproductive organs to poignant portrayals of the birthing experience. Antelo points to one 1932 painting, "Henry Ford Hospital," in which Kahlo illustrates her hemorrhaging body lying on a hospital bed with various objects, including a male fetus and a model of the female pelvic bones,
attached to her body by umbilical tethers.

**Asherman's syndrome today**

It is unclear how many women are affected by Asherman's syndrome, as it is often misdiagnosed, but it is estimated that the risk of developing the syndrome from the dilation and curettage procedure ranges between 8 percent to 30 percent. The risk increases with repeated curettage procedures. Antelo points out that, in rare cases, women may develop Asherman's syndrome without ever having been pregnant. Such cases are known as nongravid Asherman's syndrome. Those women are often diagnosed after uterine surgery or failed implantation of an intrauterine device, Antelo explained.

A proper diagnosis relies on imaging, and hysteroscopy, which allows for visual inspection of the uterine cavity and tissue, is most often used. Treatment protocols include removal of adhesions in the cavity and prevention of further scarring with hormones that promote healthy tissue growth. Sometimes, if the condition is diagnosed early and scarring is limited, fertility can be restored.

**The researcher**

"Kahlo shares with us her painful memories of miscarriage and loss," says Antelo. "As you study and recognize the anatomic detail in her paintings, you begin to realize that Kahlo has been talking to doctors and studying medical books." The fact that Kahlo chose to pursue a course of premedical studies during high school was not overlooked by Antelo, who believes that Kahlo was using her paintings not only as a form of cathartic therapy but also as a means to demonstrate the extent of her medical knowledge specific to human reproduction.

Antelo said he was moved to work on this project because of Kahlo's unique use of medical imagery in the 1944 painting "Broken Column," which illustrates many clues that physicians, including Antelo, have been trained to identify in patients experiencing physical and mental pain.

"Moreover, my own experience with a car accident and back pain gave me another level on which to connect with Kahlo - who was sharing her own experience with back pain," he said.

Antelo said he hopes his findings will spur women to find out more about the complications associated with medical procedures and to communicate with their physicians about symptoms.

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