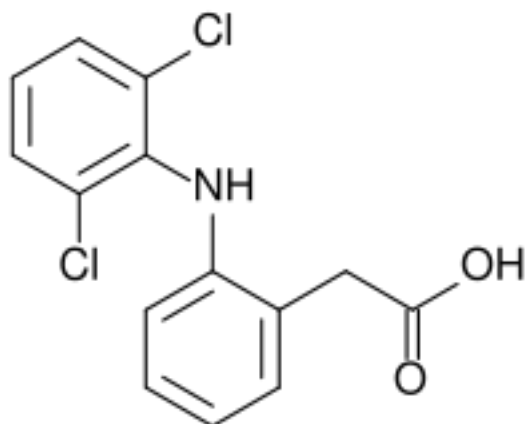


Disappearance of the Ancient Parsi Ritual: The Surprising Risk of Pharmaceuticals



2-(2-(2,6-dichlorophenylamino)phenyl)acetic acid

In a small village in Mumbai, India, a respected Parsi community elder has passed away just as the priests reach the end of a prayer for repentance. Soon after, he is bathed and carefully wrapped in clean, white cotton clothes. From then on it is important to avoid the *Druj-I Nasu*, the evil influence of decomposition; therefore, only a select few corpse-bearers touch the body as it is transported to its final destination: a *dhokma*, or Tower of Silence. All the deceased receive a walking funeral, with a long procession of white-robed mourners following close behind holding white handkerchiefs. The Parsi people follow a designated path and enter the *dhokma*, or Tower of Silence, to place the dead on a marble slab to await the vultures. The Towers of Silence are considered the most pure and natural disposal of the Parsi dead. As disciples of the prophet Zarathustra, the Parsi people worship fire; cremating is a sin and burial is a contamination of the earth, but the vulture helps release the spirit of the deceased.

However, in recent times the Oriental white-backed vultures have all but disappeared and the corpses remain in the *dhokma* becoming putrefied, noxious masses of flesh. The traditions of the Parsi people have gone through many changes in modern times, but the persistent puzzling mystery of the vulture population has played a significant role in reinvigorating the cultural identity and traditions of a society with rapidly dwindling numbers (Wadia).

In Mumbai, where 100,000 member Parsi community resides, the dead human bodies are fed to the vultures at the ossuary, also known as the Towers of Silence. In the past, hundreds of vultures circled the sky near the Tower, a guaranteed meal in close sight. However, there was a time when the vulture population neared extinction: “declining by perhaps as much as 99.7 percent” over a ten-year period (Tait). But this ecological dilemma is not limited to Parsi populated areas; it is affecting the entire country. The vultures (nature's scavengers) are able to help with decomposition much more rapidly than the insect and bacteria decomposers. Rapid devouring by the group of vultures not only adheres to the cultural beliefs of the Parsi people, but vultures also prevent the extremely slow putrefaction process and the subsequent bad odors. According to the Zoroastrian religion, because Earth, Fire, and Water are sacred and useful to mankind, to avoid their pollution by contact with putrefying flesh, the Zoroastrian religion strictly believes that human carcasses should not be buried in the ground, or burnt, or thrown into the seas, rivers, or lakes. The vultures ensure that the circle of life is working in balance with the culture of the people. But in the 1990s, a rapid decline in the *Gyps* vulture led the Bombay Natural History Society to force the government to investigate the issue in depth.

The mystery of the dying vultures forced many concerned citizens to look at the possible causes of this strange affliction. After studies were conducted, scientists discovered the root cause: diclofenac, a non-steroidal anti-inflammatory drug that is mainly used for musculoskeletal pain among livestock. Livestock farmers near the Parsi Towers of Silence had recently begun using diclofenac to reduce inflammation and pain among their herds. Although the drug worked well for its intended use, the vulture massacre was an unintended consequence. Cattle are able to metabolize the drug without any problems, but when it enters into the bird gut, serious complications result that “directly correlate residues of the anti-inflammatory drug diclofenac with renal failure” and visceral gout syndrome, a buildup of uric acid crystals in various internal organs (Oaks).

The Parsi community struggled to alleviate some of the stresses caused by this environmental catastrophe by altering ancient burial traditions. A group of Parsis went against the decree of the High Priests and buried their deceased loved ones, while others sought to maintain most aspects of tradition by erecting solar panels to channel the heat of the sun to aid the decomposition process. Many villagers appealed to the High Priests of the Parsi community to allow interring the deceased, but the religious leaders insisted that their culture be maintained and denied all requests. Burial of the deceased met further opposition after a Parsi man entered into the forbidden Tower of Silence and took photographs of the decaying corpses in an effort to place the Parsi community in a negative light. As opposition mounted, another important complaint was launched against the use of the Towers: “the real problem is the smell emanating as the body shrivels in [...] the sun.” The Parsi *panchayats* (local village councils) face the threat of a lawsuit

from the local community regarding the smell. The village councils of the Parsi community have taken on the ecological issue with a central theme in mind: “priority is towards the living, and not towards the dead” (Roy). Despite rising criticism, the increased media exposure eventually caused heightened environmental concern about the effects of a relatively ‘harmless’ chemical on the ecosystem. Many scientists drew parallels with the chemical destruction of the environment caused by DDT, as described in Rachel Carson’s Silent Spring.

While the phenomenal rise of the chemical and pharmaceutical industries has dramatically enhanced the comfort of our daily lives, our comfort may have come at the cost of our fragile ecosystem. The intersection of politics, religion and science within the Parsi community provides a representative example of how intricate and problematic ecological issues may be. The Parsi people have struggled to maintain their ethnic identity by saving the Oriental white-backed vulture, but the negative effects of contamination and smell make it an uphill battle. Although cattle farmers have been experimenting with alternative pain relievers, it is likely that other chemicals will create other ecological headaches these chemicals may create.

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