

Mictlantecuhtli, the Mexican deity of death, and associated human organs: final comment

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The difficulties arising from the organ diagnosis of the ceramic figure of Mictlantecuhtli prompted me, in my position as a pathologist, to contribute an article to *mexicon* (Berger 2004). This article was commented upon by Leonardo Lopéz Luján (2005) without his being able to provide convincing arguments to the contrary. Therefore I would like to give a final summary and statement:

In the artwork human organs are abstractly reduced to the fundamental attributes. This has been acknowledged for a long time (Fig. 1).

An anatomist or pathologist is able to determine such abstract images and recognise the organ based on the shape. Therefore a symmetrical three-lobed structure is associated with the heart-lung-packet, and not with the liver.

Any post mortem autopsy will confirm that the liver is asymmetrically shaped and situated as an irregular thick mass in the upper right abdomen. The gallbladder is located under the right lobe of the liver. It is not symmetrically enclosed by

the left lobe of the liver, which is located to the left side underneath the diaphragm (Fig. 2). The lobes are related to the vessel distribution and the biliar drainage of the liver. There exists no possibility of singular mobility of the lobes and segments. There is no possibility of a bell shaped or conical symmetric configuration of the liver around the gallbladder, because of the lack of elasticity of the liver tissue. The isolated liver forms a thick massive plate without a stem-like top (Fig. 3).

Frequently Mexican iconography depicts Mictlantecuhtli images with a heart dangling underneath the bony thorax (for example Codex Borgia, pp. 16, 22, 23, 49, 52; Codex Vaticanus 3773, p. 21). Occasionally the heart is accompanied on both sides by lobes, apparently the left and right lungs (for example Codex Borgia, pp. 50, 52, 56, 73, 75). Occasionally the heart together with these lobes is shown as an offering contained in a vessel (Codex Borgia, p. 57 and with an upended vessel, Codex Laud, p. 11). The colors used are red, yellow and turquoise.

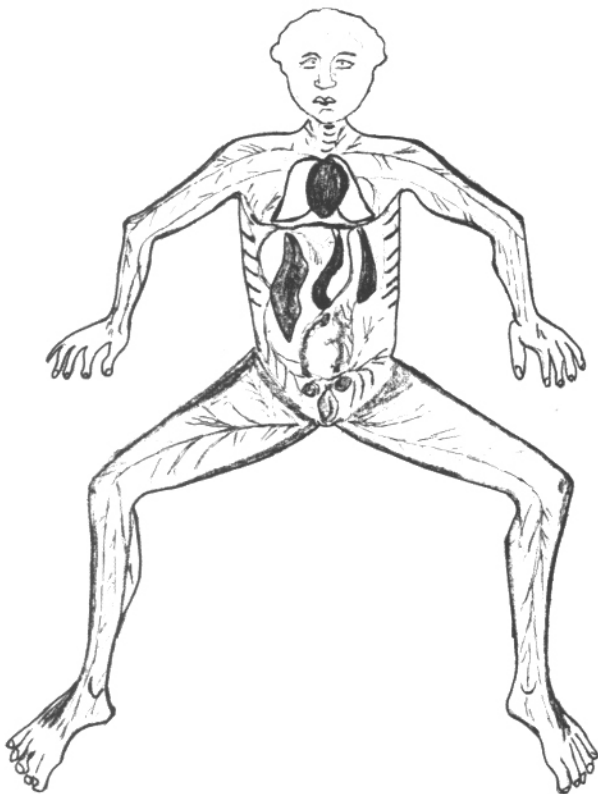


Fig. 1. Anatomical table depicting vessels, and the organs of thorax and abdomen. Ms 13th century probably based on an antique model. Basel. Universitätsbibliothek Hs.DII.11, f.171v. (Reproduction of Herrlinger 1967)

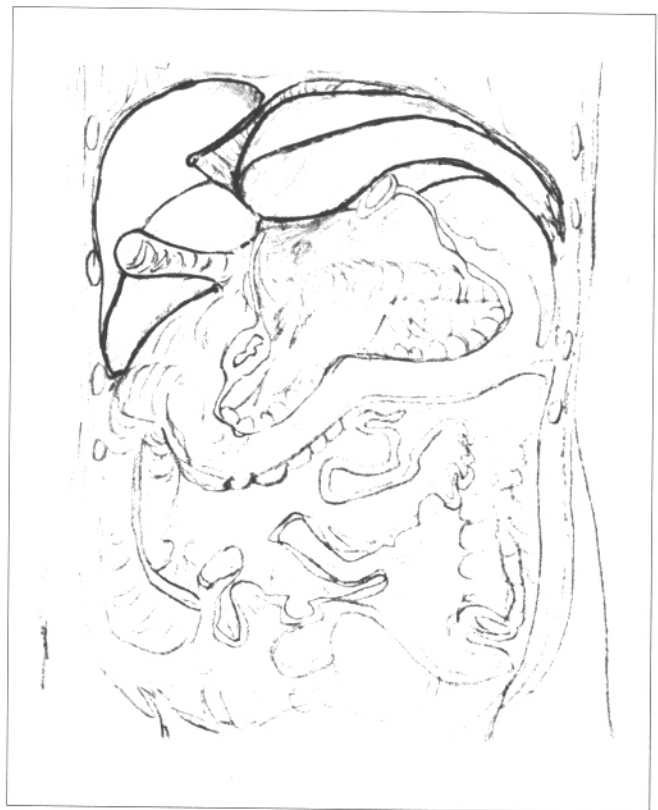


Fig. 2. Situs of the abdomen after removal of omentum majus, colon transversum and stomach. In the upper abdominal cavity the liver and gallbladder are visible. (Reproduction of Voß and Herrlinger, 1958)

The coloring used for the three-lobed forms on the *tzitzimitl*-costumes as demonstrated in the *Matricula de Tributos* is red and, once, yellow. Codex Mendoza (1992) depicts these three-lobed forms red with turquoise, occasionally red and yellow and perhaps once red with green-brown. It seems therefore questionable to use the coloring as a cardinal symptom of diagnosis.

There exists an anatomical and morphological discrepancy between the shape of the organ and its interpretation as liver, therefore the interpretation itself is improbable.

During my research I was unable to find representations of the liver in Mexican painted manuscripts. To my knowledge no painting exists which, by means of an annotation, identifies a three-lobed form as a liver.

Spiritual connections between the deity of death, *Mictlantecuhtli* and the organ liver may exist, but this connection cannot be corroborated by the three-lobed form. This fact is also confirmed by the anatomical description of the liver and the anatomical interrelations known to the Aztec (Sahagún book 10, chapter 27, §§ 12, 17; Gall 1997).

On the grounds of human anatomy, I must question humanistic concepts which include the liver as long as they are only based on the three-lobed object, which is configured like a heart-lung packet (Berger 2004, figs.)

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Fig. 3. Human liver, autopsy preparation. (Courtesy of Prof. Baba, Institute of Pathology, Klinikum Essen)

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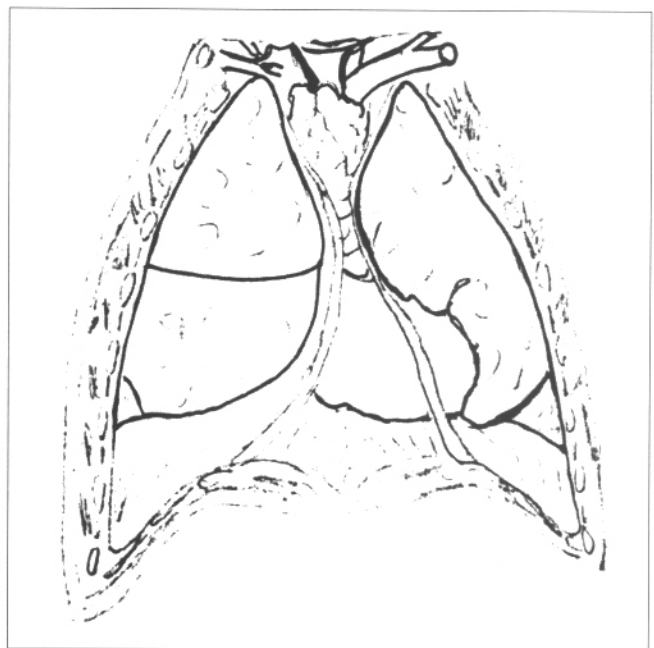


Fig. 4. Situs of the thorax with both lung, heart in the pericardium and thymus. (Reproduction of Sobotta, in Ferner and Staubsand 1982)