

The Miracle of the Heartbeat

Since 1991, I have needed a new pacemaker every five years on average. Last week I needed a replacement, my fifth. Because the wire that for 20 years connected the pacemaker to the inside of the heart started to show signs of wear and tear, it had to be replaced as well. The operation, especially the wire replacement, was delicate and critical. Luckily, it was successful without complications. After thanking the Lord ﷻ and my cardiologist, I stopped to think about Allah's creation and the creativity of humans.

While we think that the pacemaker is a great achievement, we have to remember that it was not an innovation per se. The human pacemaker was built to mimic an already existing model, the divine model. It is still a great achievement despite its risks, thousands of dollars of expense, need for hospitalization, and its short-term utility.

The divine pacemaker is the size of a lentil seed compared to the egg-sized human pacemaker. The divine one comes connected with wires that do not rust or erode and sends impulses to the heart from birth to death. I asked myself, "How many electrical impulses does this tiny pacemaker send in a lifetime of a person ordering his heart to beat?" If we assume that the heart beats 70 times per minute, it would receive 4,200 impulses per hour, 100,800 per day, 3,024,000 per month, 36,288,000 per year, and thus 2,540,160,000 in 70 years. These impulses keep the heart of a human beating, awake or asleep, day or night.

Considering there are seven billion humans on earth as we speak, and billions of animals as well, it becomes mind boggling to try to calculate the num-

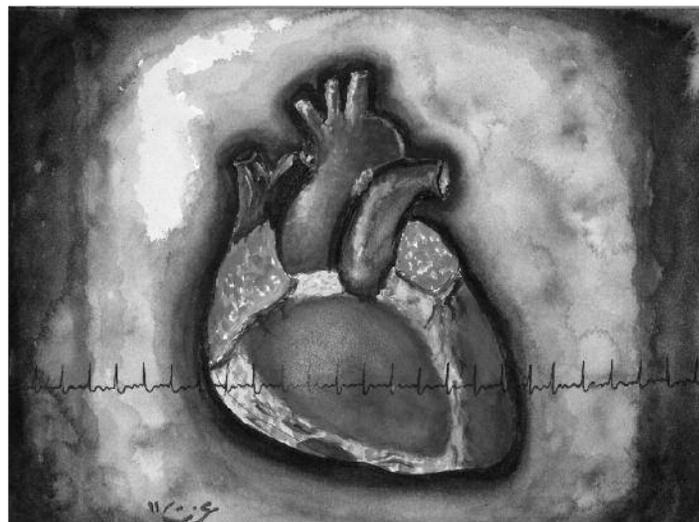


Figure 1. Painting by Dr. Ezzat Ibrahim Abouleish.

ber of these impulses that these divine pacemakers send every minute to keep this world alive. These tiny objects are divine miracles and speak for God's existence, power and perfection. Reaching that stage of thinking, I spontaneously brought myself down with my head on the ground, saying *subhānaka yā Badī' al-samāwāti wa al-arḍ* (Glory to You, the Perfect Creator of the skies and the earth).

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Editor's Note: A high-resolution, color image is available as a supplementary file at <http://jima.imana.org/article/view/8729>.