

# Bizarre Images and Beta-Adrenergic Blocking Agents: A Unique Case Report<sup>†</sup>

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**Abstract**—Vivid imagery and hallucinations are occasionally reported by patients on beta-adrenergic blocking agents. The authors document this side effect with drawings by a well-known commercial artist.

**Keywords**—adrenergic blockers, beta blockers, bizarre images, pindolol, propranolol

Propranolol and pindolol are potent, nonselective beta-adrenergic blocking agents and are, therefore, widely used in the management of cardiovascular disorders, including cardiac arrhythmias. Along with their therapeutic success are a variety of potential central nervous system effects that include nightmares and hallucinations (Greenblatt & Koch-Weser 1973; Greenblatt & Shader 1972). The same type of side effects has been described with use of metoprolol, a cardioselective blocker. Although this side effect has been reported previously, it apparently has never been illustrated in any detail. The purpose of this article is to provide a description of these images, occurring during treatment with

pindolol, as they were experienced by one patient who was uniquely qualified to report on them. The artist's relevant personal and clinical history is reviewed briefly in the following case study.

## CASE STUDY

### Personal History

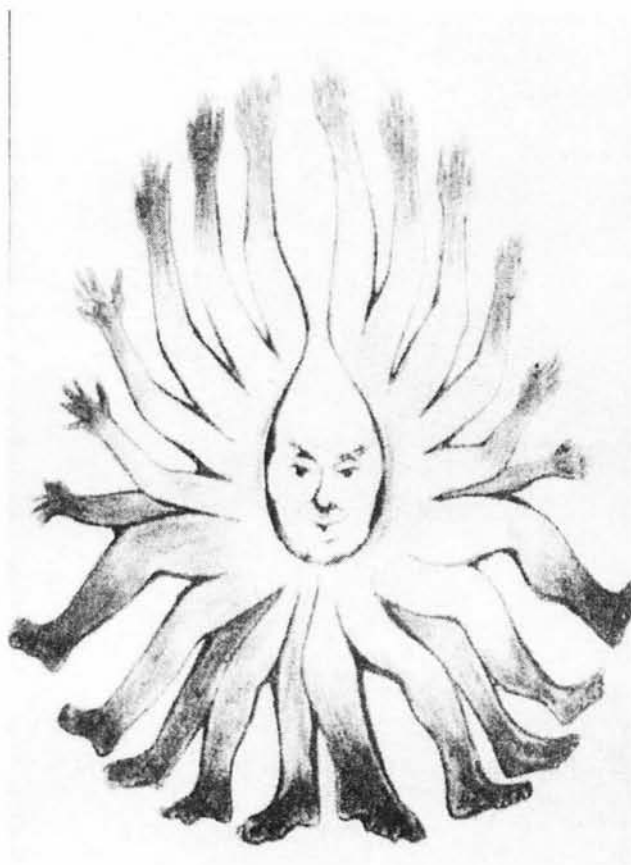
Francis M. Mair was born May 5, 1916. At the time of his death 75 years later, an epitaph written by a colleague for his memorial stated that Francis Mair was a philosopher, printer, sculptor, poet, artist, and one of the most creative and prolific designers of our time; that he did it all effortlessly, and was an epitome of the Renaissance Man. For many years he played a leading role in the famed Walter Lander Company of industrial design and, among other things, had the key creative role in the design of labels, logos, and packaging of a wide variety of leading retail food and other products. The epitaph also noted that packaging, exhibit, furniture, and product design were only part of his repertoire, which also included elegant Spenserian

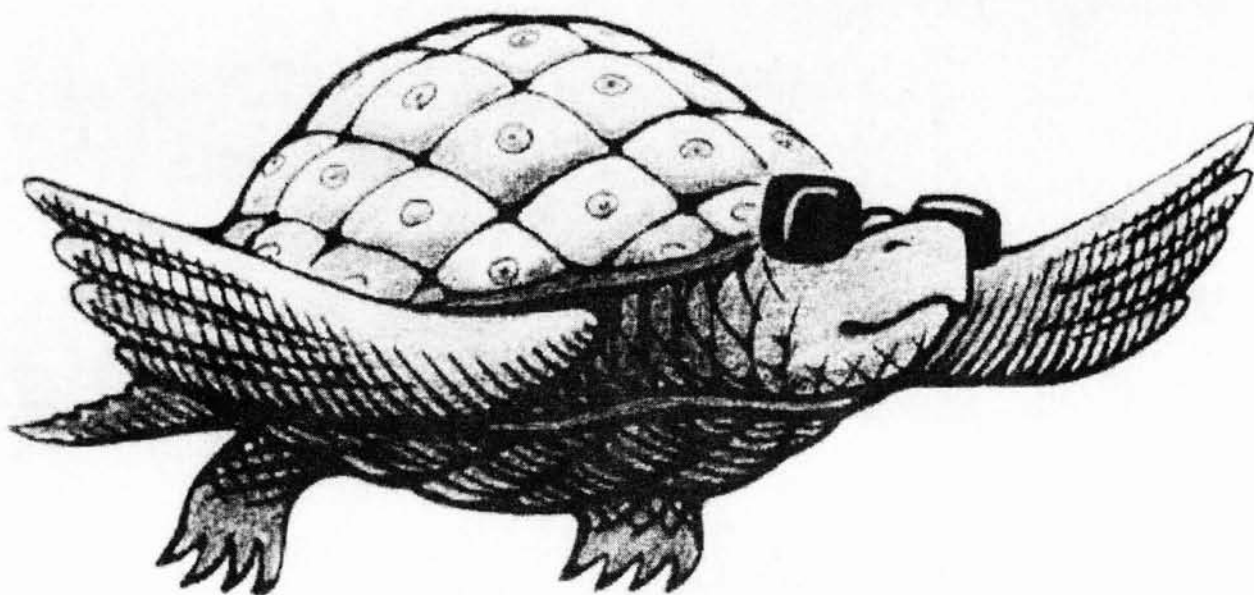
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and calligraphic scripts with flourishes and cartouches for any occasion. He produced a constant stream of delights across the Baroque through Rococo, from the undulating line of Art Nouveau to the geometries of Art Deco to Bauhaus. Some of the papers and drawings of this gifted man are housed in the collection of industrial design and consumer culture in the National Museum of American History of the Smithsonian Institution in Washington, D.C.

### Medical History

Mr. Mair was 64 inches tall and weighted 190 pounds. A heart murmur was initially discovered during his adulthood. He stopped smoking cigarettes in 1963 and rarely ingested alcoholic beverages.

Benign prostatic hypertrophy developed and, in 1981, the patient began to note sudden episodes of cardiac tachy-rhythmia during nocturnal voiding. A physician placed him briefly on propranolol and then on metoprolol, which was discontinued after several months. He was referred to one of the authors (R.R.) early in 1982 and placed on pindolol, but this too was discontinued after two weeks because of the side effect described below. In early 1990, the patient manifested a slow sinus syndrome and a permanent cardiac pacemaker was implanted. A year later he died of complications of secondary liver cancer.

### Pindolol and Bizarre Images

Shortly after use of pindolol was discontinued, the patient described his unique "dream" experience during its brief period of administration. He wrote the following letter to one of the authors (R.R.) in 1983:

If it would be of any clinical interest to you or some fellow cardiologists, I could record some of the images that Viskin [pindolol] induced. They would be done in water-color or colored pencil, or both. PDR says they are "bizarre dreams." They are not dreams as such. They are strictly images that appear, one after the other. One opens ones eyes to wipe them out. I've never had any hallucinatory drugs, so I don't know if there is any comparison. I do know that if I could record one tenth or even one percent of them I would be a modern Hieronymus Bosch. The fact that they disappear so readily makes it difficult to record many. The ones I have in mind I made particular note to remember in case you are interested. One note on dreams. They have a sequence and a plot. These images are like slides instead of a movie.

In a letter dated January 1984, he further wrote: "They have certainly had an influence on how I look at some things. I'm surprised at how many are distorted human visages."

The patient had made sketches of these images literally at the times of their occurrence and was now requested to set them on paper; several of them are presented with this article. Mr. Mair claimed that he was awakened by seeing the images, which he said crossed the back of his closed eyes. Dreams are often bizarre, but seldom remembered. It is possible that this beta-blocker made the image sufficiently vivid that they awoke him and could be remembered.

It is of interest that he had no central nervous system manifestations while taking propranolol or metoprolol. Although propranolol, metoprolol and pindolol are all beta-adrenergic receptor blocking agents that occasionally cause dreams, nightmares, and hallucinations, only pindolol also has intrinsic sympathomimetic activity and is described as causing bizarre dreams. Those experienced and portrayed by Mr. Mair appear to be a unique representation and, in saying this, the reader is cautioned to consider the limits on the extent to which Mair's experience can be generalized.

The authors have 40 of the artist's renderings which, in their opinion, range from the bizarre to the whimsical. The one whimsical drawing chosen—the flying turtle—would make a nice modern day "screen saver!" The choice of illustrations was based on three factors: (1) Mr. Mair's comment that "... many are distorted human visages." (2) journal space considerations; and (3) expectations of how they would appear in black and white, rather than as the original watercolor.

### REFERENCES

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