

MAGNIFYING COLLIMATORS

The magnifying collimators discussed by Rudin, Bardfeld, and Hart (1) deserve the serious attention of all who are interested in gamma camera image improvement.

It is amazing that the very obvious collimator aberrations, which appear in several of the images, are so lightly dismissed in this otherwise well-conceived paper. It has been shown by Wilkes, et al (2), by this writer (3), and by Bonte, et al (4) that collimator aberrations may seriously disrupt gamma camera images. In addition, it has been shown by this writer (5) that as overall system performance improves collimator artifacts become a more serious problem.

It should be pointed out that collimator aberrations may be eliminated by setting the collimator into an appropriate lateral motion during the exposure period (2,3,5). While the basic principle is different, the mechanics of such motion are analogous to the moving Potter-Bucky grid so well known to radiolo-

gists. At present a moving collimator is being supplied by Nuclear-Chicago Corp. on tomographic adaptations of their gamma camera.

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AUTHORS' REPLY

We would like to thank Dr. R. C. Bramlet for giving us the opportunity to promptly reply to his letter concerning our concise communication on magnifying collimators (1). The basic idea of our paper was that the lateral or transverse resolution of the gamma camera system can be improved by as simple a means as slightly focusing the collimator channels. We are glad to see that there is no disagreement with this basic principle. The objection is “. . . that the very obvious collimator aberrations, which appear in several of the images are so lightly dismissed in this otherwise well-conceived paper.”

Our only oversight, which we deeply regret, is in not referring to the excellent work and complete discussions of this type of aberration in the references that Dr. Bramlet's letter gives. We would hope that it is clear that the obliquity ambiguities to which we referred in our paper are completely different from the large hole-induced aberrations that Dr. Bramlet's letter deals with.

Finally, we wish to indicate that in papers soon to be published (2,3), we have applied the magni-

fying idea to the moving tomographic collimator to which Dr. Bramlet refers in the last part of his letter. The magnified tomographic images should show better resolution without either the hole-induced aberration or the obliquity ambiguity aberration.

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