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Recently Big Pharma has been in the news for increased costs associated with insulin and the opioid epidemic and the consequential costs associated with human suffering and loss of life. While these investigations and the holding of Big Pharma accountable have taken many years (in fact many *decades*), it did not occur until there was sufficient public outrage and a considerable economic impact on an already strained medical and insurance system.

Over the last several weeks the FBI has raided offices at uBiome where questionable billing practices for testing have been brought to light. On social media the general public has been reassured by uBiome that insurance will cover the costs of these tests. Also during the last few weeks, the U.S. Federal Government has disclosed new investigations of pharmaceutical companies who have been involved in potential "price fixing" of generic drugs, dramatically controlling the costs of medications, which so many people depend upon.

While these investigations may seem like we are making progress, what about the less obvious and potentially more fatal misrepresentations being made by Big Pharma?

The FDA mission statement is:

"The Food and Drug Administration is responsible for protecting the public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, and medical devices; and by ensuring the safety of our nation's food supply, cosmetics, and products that emit radiation."

Short Communication

Holding big Pharma Accountable

How can the FDA actually do its job, if the information reported to the FDA does not correctly report how these drugs work, including the pharmacodynamics and pharmacokinetics of these medications to the FDA? Isn't the FDA dependent upon Big Pharma to update the FDA and Physicians, Hospitals, Insurance Companies including CMS and patients, regarding all facts and information known about a drug? It is unconscionable to state, "Definitive human studies to demonstrate possible redistribution have not been reported." when there has been several diagnostic studies [1–38] published showing the redistribution of these drugs.

As a result, physicians have been incorrectly told that many of these drugs, in contrast to older drugs, require two doses to look for heart disease, instead of one. The misinformation has resulted in each patient over the last three decades receiving a second injection of radioactive isotope. Using a conservative estimate [39], there are approximately 10 million such studies performed each year in the United States alone. Using 10 mCi as an estimate for these second-injected doses, this means there has been an *additional* 3 billion millicuries or an extra 3 million curies being given to patients-radiation which hospital and clinic personnel have also been exposed to. Placed in perspective, the Fukushima Daiichi 2011 event released 10 million curies.

These same conservative estimates would place the sale of these 300 million additional second injections around \$12 billion to physicians and hospitals. This price is typically doubled or tripled when passed onto the patients and insurance companies, meaning the additional costs to the patients and insurance, including CMS, is more on the order of \$24-36 billion. Diagnostically, by failing to use only one dose of these drugs and image earlier when the redistribution can actually be seen and measured [1-38], there is a failure to find up to 40% of ischemic heart disease (redistribution "wash-in") and there is a conservative [36,39] death rate of 100 thousand Americans each year equaling a potential 3 million deaths due to missing this redistribution by failing to look for ischemic heart disease at the right time.

If the manufactures of opioids, insulin, uBiomes stoolspecimen testing, and the fixing of drug prices in the marketplace are sufficient to result in action being taken by the federal government, surely the failure to update the FDA on this clinically significant information is long past due.

References

- Sheikine Y, Berman DS, Di Carli MF (2010) Technetium-99m-Sestamibi Redistribution after Exercise Stress Test Identified by a Novel Cardiac Gamma Camera: Two Case Reports. Clin Cardiol 33: E39-E45. Link: http://bit.ly/2Sb04xt
- Fallahi B, Haghighatafshar M, Farhoudi F, Salehi Y, Aghahosseini F (2014)
 Comparative evaluation of the diagnostic accuracy of 99mTc-sestamibi
 gated SPECT using five different sets of image acquisitions at stress and
 rest phases for the diagnosis of coronary artery disease. Am J Nucl Med Mol
 Imaging 4: 10-16. Link: http://bit.ly/30yijjz
- Beiki D, Fallahi B, Mohseni Z, Khalaj A, Fard-Esfahani A, et al. (2010) Initial and delayed stress phase imaging in a single-injection double-acquisition SPECT. The potential value of early 99mTc-MIBI redistribution in assessment of myocardial perfusion reversibility in patients with coronary artery disease. Nuklearmedizin 49: 19-27. Link: http://bit.ly/2S98ipU
- Crane P, Laliberte R, Heminway S, Thoolen M, Orlandi C (1993) Effect of mitochondrial viability and metabolism on technetium-99m-sestamibi myocardial retention. Eur J Nucl Med 20: 20-25. Link: http://bit.ly/32kdjAF
- Holman BL, Jones AG, Lister-James J, Davison A, Abrams MJ, et al. (1984)
 A new Tc-99m-labeled myocardial imaging agent, Hexakis(t-butylisonitrile)-Technetium(I) [Tc-99m TBI]: Initial experience in the human. J Nucl Med 25: 1350-1355. Link: http://bit.ly/2ScSB1e
- Li Q-S, Solot G, Frank TL, Wagner Jr HN, Becker LC (1990) Myocardial redistribution of Technetium-99m-Methoxyisobutyl Isonitrile (SESTAMIBI). J Nucl Med 31: 1069-1976. Link: http://bit.ly/2XYdhzk
- Maublant JC, Gachon P, Moins N (1988) Hexakis (2-methoxy isobutylisonitrile) technetium-99m and thallium-201 chloride: uptake and release in cultured myocardial cells. J Nucl Med 29: 48-54. Link: http://bit.ly/2JE3jK7
- Pace L, Catalano L, Del Vecchio S (2005) Washout of [99mTc] sestamibi in predicting response to chemotherapy in patients with multiple myeloma. Q J Nucl Med Mol Imaging 49: 281-285. Link: http://bit.ly/2XIhDLp
- Hurwitz GA, Ghali SK, Husni M (1998) Pulmonary uptake of Technetium-99m-Sestamibi induced by dipyridamole-based stress or exercise. J Nucl Med 39: 339-345. Link: http://bit.ly/2NQMe54
- Hurwitz GA, Fox SP, Driedger AA, Willems C, Powe JE (1993) Pulmonary uptake of sestamibi on early post-stress images: angiographic relationships, incidence and kinetics. Nucl Med Commun 14: 15-22. Link: http://bit.ly/2XHa9Zj
- 11. Saha M, Forrest TF, Brown KA (1994) Lung uptake of technetium-99msestamibi: relation to clinical, exercise, hemodynamic, and left ventricular function variables. J Nucl Cardiol 1: 52-56. Link: http://bit.ly/2XCeywq
- Giubbini R, Campini R, Milan E (1995) Evaluation of technetium-99msestamibi lung uptake: correlation with left ventricular function. J Nucl Med 36: 58-63. Link: http://bit.ly/2XEw4QQ
- Sugiura T, Takase H, Toriyama T (2006) Usefulness of Tc-99m methoxyisobutylisonitrile scintigraphy for evaluating congestive heart failure. J Nucl Cardiol 13: 64-68. Link: http://bit.ly/2XIXDDN
- 14. Kumita S, Seino Y, Cho K, Nakajo H, Toba M, et al. (2002) Assessment of myocardial washout of Tc-99m-sestamibi in patients with chronic heart failure: comparison with normal control. Ann Nucl Med 16: 237-242. Link: http://bit.ly/2JvZhEU
- Matsuo S, Nakae I, Tsutamoto T, Okamoto N, Horie M (2007) A novel clinical indicator using Tc-99m sestamibi for evaluating cardiac mitochondrial function in patients with cardiomyopathies. J Nucl Cardiol 14: 215-220. Link: Link: http://bit.ly/2xKWGAa

- 16. Sugiura T, Takase H, Toriyama T, Goto T, Ueda R, et al. (2006) Usefulness of Tc-99m methoxyisobutylisonitrile scintigraphy for evaluating congestive heart failure. J Nucl Cardiol 13: 64-68. Link: http://bit.ly/2XIXDDN
- 17. Ikawa M, Kawai Y, Arakawa K (2007) Evaluation of respiratory chain failure in mitochondrial cardiomyopathy by assessments of 99mTc-MIBI washout and 123I-BMIPP/99mTc-MIBI mismatch. Mitochondrion 7: 164-170. Link: http://bit.ly/2LlbRJ8
- Meissner K, Sperker B, Karsten C (2002) Expression and localization of P-glycoprotein in Human Heart: Effects of Cardiomyopathy. J Histochem Cytochem 50: 1351-1356. Link: http://bit.ly/2LR3uEK
- Ono S, Yamaguchi H, Takayama S, Kurabe A, Heito T (2002) Rest delayed images on 99mTc-MIBI myocardial SPECT as a noninvasive screen for the diagnosis of vasospastic angina pectoris. Kaku Igaku 39: 117-124. Link: http://bit.ly/2YLGgn6
- Ono S, Yakeishi Y, Yamaguchi H, Abe S, Tachibana H, et al. (2003) Enhanced regional washout of technetium-99m-sestamibi in patients with coronary spastic angina. Ann Nucl Med 17: 393-398. Link: http://bit.ly/2XUVOrv
- 21. Fukushima K, Momose M, Kondo C (2007) Myocardial kinetics of (201) Thallium, (99m) Tc-tetrofosmin, and (99m) Tc-sestamibi in an acute ischemia-reperfusion model using isolated rat heart. Ann Nucl Med 21: 267-273. Link: http://bit.ly/2LRaPE4
- VanBrocklin HF, Hanrahan SM, Enas JD (2007) Mitochondrial avid radioprobes. Preparation and evaluation of 7'(Z)-[1251]iodorotenone and 7'(Z)-[1251]iodorotenol. Nucl Med Biol 34: 109-116. Link: http://bit.ly/2LjB72v
- Tanaka R, Nakamura T, Chiba S (2006) Clinical implication of reverse redistribution on 99mTc-sestamibi images for evaluating ischemic heart disease. Ann Nucl Med 20: 349-356. Link: http://bit.ly/2XHRLiG
- Liu Z, Johnson G, Beju D, Okada RD (2001) Detection of myocardial viability in ischemic-reperfused rat hearts by Tc-99m sestamibi kinetics. J Nucl Cardiol 8: 677-686. Link: http://bit.ly/2XXC8Dj
- Shin WJ, Miller K, Stipp V, Mazour S (1995) Reverse redistribution on dynamic exercise and dipyridamole stress technetium-99m-MIBI myocardial SPECT. J Nucl Med 36: 2053-2055. Link: http://bit.ly/2XZGidl
- Takeishi Y, Sukekawa H, Fujiwara S (1996) Reverse redistribution of technetium-99m-sestamibi following direct PTCA in acute myocardial infarction. J Nucl Med 37: 1289-1294. Link: http://bit.ly/32s7L7x
- 27. Fujiwara S, Takeishi Y, Atsumi H (1998) Prediction of functional recovery in acute myocardial infarction: comparison between sestamibi reverse redistribution and sestamibi/BMIPP mismatch. J Nucl Cardiol 5: 119-127. Link: http://bit.ly/2LVQAFc
- Ayalew A, Marie PY, Menu P (2000) A comparison of the overall firstpass kinetics of thallium-201 and technetium-99m MIBI in normoxic and low-flow ischaemic myocardium. Eur J Nucl Med 27: 1632-1640. Link: http://bit.ly/2JDqPa5
- Richter WS, Cordes M, Calder D, Eichstaedt H, Felix R (1995) Washout and redistribution between immediate and two-hour myocardial images using technetium-99m sestamibi. Eur J Nucl Med 22: 49-55. Link: http://bit.ly/2xJ1upR
- Meerdink DJ, Leppo JA (1990) Myocardial transport of hexakis(2-methosyisobutyl isonitrile) and thallium before and after coronary reperfusion. Circulation Research 66: 1738-1746.
- 31. Ayalew A, Marie PY, Menu P (2002) 201 Tl and 99m Tc-MIBI retention in an isolated heart model of low-flow ischemia and stunning: Evidence of negligible impact of myocyte metabolism on tracer kinetics. J Nucl Med 43: 566-574. Link: Link: http://bit.ly/2XD6Oua
- 32. Takahashi N, Reinhardt CP, Marcel R, Leppo JA (1996) Myocardial uptake



- of 99m Tc-tetrofosmin, Sestamibi, and 201 TI in a model of acute coronary reperfusion. Circulation 94: 2605-2613. Link: http://bit.ly/32nemQh
- Tanaka R, Nakamura T, Chiba S, Ono T, Yosmtani T, et al. (2006) Clinical implication of reverse redistribution of 99mTc-sestamibi images for evaluating ischemic heart disease. Ann Nucl Med 20: 349-356. Link: http://bit.ly/2XHRLiG
- 34. Sinusas AJ, Bergin JD, Edwards NC, Watson DD, Ruiz M, et al. (1994)
 Redistribution of 99mTc-Sestamibi and 201-Tl in the Presence of a
 Severe Coronary Artery Stenosis. Circulation 89: 2332-2341. Link:
 http://bit.ly/2x119DP
- 35. Taillefer R, Primeau M, Costi P (1991) Technetium-99m-Sestamibi Myocardial Perfusion Imaging in Detection of Coronary Artery Disease: Comparison Between Initial (1-Hour) and Delayed (3-Hour) Postexercise Images. J Nucl Med 32: 1961-1965. Link: http://bit.ly/2LLA4a0

- 36. Fleming RM, Chaudhuri TK, McKusick A (2019) The FDA, HHS, Sestamibi Redistribution and Quantification. Acta Scientific Pharmaceutical Sciences 3: 47-69. Link: http://bit.ly/2JBFWAI
- 37. Fleming RM, Fleming MR, Chaudhuri TK, McKusick A (2019) Definitive Human Studies Demonstrate Clinically Important Sestamibi Redistribution. Acta Scientific Medical Sciences 3: 1-7.
- 38. Fleming RM, Fleming MR, Chaudhuri TK (2019) Efforts to visually match 5- and 60-minute post-stress images following a single injected dose of sestamibi clearly demonstrate changes in sestamibi distribution: Demonstrating once and for all clinical recognition that sestamibi redistributes. JCMC (in press). J Cardiovasc Med Cardiol 6: 30-35. Link: http://bit.ly/2XK6vc3
- 39. Nuclear Medicine Communications (1997) Canadian Medical Association Journal 18.

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