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Late Night Thoughts

O friends, friends, not these sounds! Let us sing something more pleasant, more full of gladness. O Joy, let us praise thee!

Schiller: Ode to Joy [Translator: Louis Untermeyer]

ewis Thomas, the physician-administrator-writer, in one of his last essays "Late Night Thoughts on Listening to Mahler's Ninth Symphony," published in 1980, expressed wonder and grief at the legacy confronting young people at that time. Instead of emerging from their educational incubators to face the world with bright futures, he saw the potential for mankind's destruction from nuclear weapons as a dark cloud that cast a shadow over future hope and optimism.

This month marks the 50th year since the atom bomb was detonated over Hiroshima and Nagasaki. Whereas the issues leading to these events are still debated, clearly that action wrought extensive death and suffering to the citizens of those cities; so much so that their very names have become synonyms for the awful destructive capacity of nuclear weapons.

Japan's prominence as a world leader, its prosperous and proud nuclear energy industry and nuclear medicine community, is a testament to the fortitude and collective wisdom of the Japanese people despite the terrible introduction of atomic energy experienced by this nation.

No special merit is derived from suffering or nations failing to find a peaceful resolution of differences. The examples of Hiroshima and Nagasaki, however, have served to forge a conscience for the world. Despite the cold war and the many years of friction between the major world powers, further use of these weapons has not occurred. Instead, we have witnessed the beginnings of nuclear disarmament and the development of peaceful uses of the atom. Nuclear medicine today is an essential element in diagnostic medicine; indeed, the techniques learned in using its magic bullets for medical diagnosis are on the brink of wide utility as radioactive therapeutic agents. Nuclear power, the generation of electricity from water heated by fusion, also provides a significant fraction of the electricity consumed throughout the world. Although issues of fuel recycling, waste disposal and societal acceptance of this source of energy are unresolved, the fact remains that much of the standard of living throughout the world now depends on nuclear power.

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REFERENCES

- Homma H, Yamanaka A, Tanimoto S, et al. Diffuse panbronchiolitis: a disease of the transitional zone of the lung. Chest 1983;83:63-69.
- Atushi N. Ultrastructural characteristics of bronchial cilia in patients with respiratory infectious disease. *Jpn J Thorac Dis* 1983;21:564-573.
- Amitani R, Tanaka E, Suzuki Y, et al. A study on ultrastructure and motility
 of tracheo-bronchial cilia in patients with diffuse panbronchiolitis. *Jpn J Chest Dis* 1988;47:483–490.
- Isawa T, Teshima T, Hirano T, et al. Radioaerosol inhalation lung cinescintigraphy: a preliminary report. Tohoku J Exp Med 1981;134:245-255.
- Isawa T, Teshima T, Hirano T, et al. Mucociliary clearance mechanism in smoking and nonsmoking normal subjects. J Nucl Med 1984;25:352-359.
- Ito S, Mikami R, Ryujin Y, et al. Application of aerosol inhalation cinescintigraphy: clinical investigation of mucociliary transport. *Jpn J Thorac Dis* 1984;22:961–969.
- Kudou S, Hagiwara K, Uetake K, et al. Clinical effect of low-dose longterm erythromycin chemotherapy on diffuse panbronchiolitis. *Jpn J Thorac Dis* 1987;25:632-642.
- Sawaki M, Mikami R, Mikasa K, et al. The long-term chemotherapy with erythromycin in chronic lower respiratory tract infections: second report; including cases with *Pseudomonas* infections. *Kansenshogaku Zasshi* 1986; 60:45-50.
- Chijimatsu Y, Tamura N, Maeno H, et al. A study of erythromycin therapy for the patients of diffuse panbronchiolitis. *Jpn J Chest Dis* 1986;45:299–305.
- Yamamoto M, Kondo A, Tamura M, et al. Long-term therapeutic effects of erythromycin and newquinolone antibacterial agents on diffuse panbronchiolitis. *Jpn J Thorac Dis* 1990;28:1305–1313.
- Mikami M. Clinical and pathological significance of neutrophil elastase in sputum and the effect of erythromycin in chronic respiratory disease. *Jpn J Thorac Dis* 1991;29:72–83.
- Sade J. The role of mucus in transport by cilia. Am Rev Respir Dis 1970; 48-52.
- Sackner MA, Rosen MJ, Wanner A. Estimation of tracheal mucus velocity by bronchofiberscopy. J Appl Physiol 1973;34:495–499.

- Friedman M, Scott FD, Poole DO, et al. A new roentgenographic method for estimating mucus velocity in airways. Am Rev Respir Dis 1977;115:67– 74.
- Yeates DB, Aspin N, Levison H, Jones MT, et al. Mucociliary tracheal transport rates in man. J Appl Physiol 1975;39:487-495.
- Morrow PE, Gibb FR, Gazioglu KM. A study of particulate clearance from the human lungs. Am Rev Respir Dis 1967;96:1209-1221.
- Wanner A. Clinical aspects of mucociliary transport. Am Rev Respir Dis 1977;116:73–125.
- Ninomiya H, Ichikawa Y, Koga H, et al. Elastase activity in bronchoalveolar lavage fluid from patients with diffuse panbronchiolitis. *Kansenshogaku Zasshi* 1991;65:672-680.
- Tegner H, Ohlsson K, Toremalm NG, et al. Effect of human leukocyte enzyme on tracheal mucosa and its mucociliary activity. *Rhinology* 1979; 17:199-206.
- Smallmann LA, Hill SL, Stockley RA, et al. Reduction of ciliary beat frequency in vitro by sputum from patients with bronchiectasis: a serine proteinase effect. *Thorax* 1984;39:663-667.
- Kita E, Sawaki M, Oku D, et al. Suppression of virulence factors of Pseudomonas aeruginosa by erythromycin. J Antimicrob Chemother 1991; 27:273–284.
- Mikasa K, Kita E, Sawaki M, et al. The anti-inflammatory effect of erythromycin in zymosa-induced peritonitis of mice. J Antimicrob Chemother 1992;30:339-348.
- Tanakadate A, Sasaki K, Nemoto H, et al. Effect of long-term, low doses of erythromycin on diffuse pan-bronchiolitis (DPB). J Med Soc Toho Jpn 1991;38:211-220.
- Imai T, Ohishi H, Katada H, et al. Bronchoscopic findings and aerosol inhalation cine-scintigraphy in cases with diffuse panbronchiolitis treated effectively by erythromycin. J Jpn Soc Bronchology 1990;12:382-390.
- Ohnuki M, Ito S, Imai T, et al. The immediate effect of terubutaline sulphate, a β-adrenoreceptor stimulating agent, on the mucociliary transport system. Jpn J Chest Dis 1990;49:536-541.

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Happily, Thomas' foreboding evoked by Mahler's Ninth Symphony has not been sustained by events since the publication of that essay. In seeking inspiration in music, I prefer the message of Beethoven's Ninth Symphony in which the promise of the first movement, darkened by the brooding of the second, is ultimately fulfilled in the fourth. The exhilaration and optimism are explicitly expressed in the words of Schiller which become the text for the final movement. This renaissance of hope occupies my thoughts as I recall the dark days of 50 years ago and the progress since then in using atomic energy.

Stanley J. Goldsmith, MD, Editor-in-Chief The Journal of Nuclear Medicine August 1995