

THE AUTHOR REPLIES: Poling implies that by omitting his phrase “many in the autism community and their champions,” I unfairly attributed the notion that vaccines might cause autism to him alone. However, Dr. Poling’s public announcement of the DHHS concession to the press and his subsequent appearances on national television and at autism conferences suggest that he is, at the very least, a vocal centerpiece of that community.

Poling claims that I didn’t have access to his daughter’s medical records. My information was based on a verbatim transcript of the DHHS concession, which stated that his daughter had had frequent ear infections and a series of viral infections early in life. These infections, which are a far greater immunologic challenge than attenuated or inactivated vaccines, are not in dispute.

Poling states that my assertion that the administration of multiple vaccines is safe is an “opinion . . . unsupported by clinical trials.” But studies of concomitant use, which are required by the Food and Drug Administration before licensure to show that new vaccines do not affect the safety or immunogenicity of existing vaccines or vice versa, have clearly shown that multiple vaccines can be administered safely.

Poling agrees with Healy that “you should [n]ever turn your back on any scientific hypothesis because you’re afraid of what it might show.”

However, scientists have not been afraid to test the hypothesis that vaccines might cause autism. Far from it: the ill-founded notion that the measles–mumps–rubella (MMR) vaccine caused autism was tested in 10 epidemiologic studies. Unfortunately, the public airing of that hypothesis caused thousands of parents to avoid the MMR; many children were hospitalized and several died from measles as a result.¹⁻⁴ Now, Poling and Healy are standard-bearers for the poorly conceived hypothesis that children receive too many vaccines too early. As a consequence, some parents are choosing to delay, withhold, or separate vaccines. The problem here is not a failure of scientists to consider hypotheses; rather, it is a failure of the media and the public to distinguish hypotheses from scientific evidence.

Paul A. Offit, M.D.

Children’s Hospital of Philadelphia
Philadelphia, PA 19104

1. Mulholland EK. Measles in the United States, 2006. *N Engl J Med* 2006;355:440-3.
2. McBrien J, Murphy J, Gill D, Cronin M, O’Donovan C, Cafferkey MT. Measles outbreak in Dublin, 2000. *Pediatr Infect Dis J* 2003;22:580-4.
3. Jansen VAA, Stollenwerk N, Jensen HJ, Ramsay ME, Edmunds WJ, Rhodes CJ. Measles outbreaks in a population with declining vaccine uptake. *Science* 2003;301:804.
4. Smith MJ, Bell LM, Ellenberg SE, Rubin DM. Media coverage of the measles-mumps-rubella vaccine and autism controversy and its relationship to MMR immunization rates in the United States. *Pediatrics* 2008;121(4):e836-e843.

More on Microembolism and Foam Sclerotherapy

TO THE EDITOR: Ceulen et al. (April 3 issue)¹ found intracardiac gas emboli in all patients treated with polidocanol foam (air-to-liquid ratio, 4:1), noting the potential for microembolism. We corroborate this observation in a series of 45 patients treated with proprietary very-low-nitrogen (<0.8%) polidocanol microfoam (Varisolve) generated through a sterile canister system controlling bubble size. In our unpublished series, intracardiac gas emboli were detected in all patients.

An ongoing, multicenter investigational-new-drug (IND) trial involving patients with great-saphenous-vein incompetence and right-to-left cardiac shunts is investigating the clinical significance of gas emboli with the proprietary very-low-nitrogen microfoam. On pretreatment screening, the prevalence of right-to-left shunt was unexpectedly high (40%). During treatment, 36

patients had cerebral emboli, detected by transcranial Doppler studies, and underwent extensive monitoring, including diffusion-weighted magnetic resonance imaging (MRI) at 24 hours and 28 days. No cerebral lesions were detected, and no abnormalities were noted on perimetry or assessment of cardiac markers.² The study will continue until 50 patients with cerebral emboli have been studied.

In contrast, the risk associated with physician-compounded room-air foams is difficult to quantify in the absence of specific data on the potential for cerebral infarction.

Janet E. Rush, M.D.

David D.I. Wright, M.B.

BTG International
West Conshohocken, PA 19428

Drs. Rush and Wright report being employees of BTG International, the company developing the proprietary microfoam Varisolve under an IND application. No other potential conflict of interest relevant to this letter was reported.

1. Ceulen RPM, Sommer A, Vernooij K. Microembolism during foam sclerotherapy of varicose veins. *N Engl J Med* 2008;358:1525-6.
2. Regan JD, Gibson KD, Ferris B, et al. Safety of proprietary sclerosant microfoam for saphenous incompetence in patients with R-to-L shunt: interim report. *J Vasc Interv Radiol* 2008;19: Suppl:S35. abstract.

THE AUTHORS REPLY: Rush and Wright confirm our report on intracardiac gas emboli in both the right and left side of the heart during foam sclerotherapy in patients with patent foramen ovale. However, we describe neurologic signs in two patients after foam sclerotherapy, whereas Rush and Wright state that none of the patients with cerebral foam emboli had neurologic symptoms or cerebral lesions on MRI.

Foam can be produced with a variety of agitation techniques that result in differences in bubble size and rate of reabsorption.¹ We applied the double syringe technique, which led to larger bubbles than Rush and Wright's specifically engineered Varisolve technique to dispense foam hav-

ing a highly controlled bubble-size distribution. Moreover, for polidocanol-foam preparation, Rush and Wright used a very-low-nitrogen gas mixture, whereas we used room air, which is associated with increases in bubble number and size.² Therefore, we believe that the results of the two studies are difficult to compare.

Although we still believe that foam sclerotherapy is a safe procedure and routine screening for patent foramen ovale before foam sclerotherapy is not recommended, we also believe that further research regarding foam characteristics and consequences of foam emboli is necessary.

Roeland P.M. Ceulen, M.D.

GROW School for Oncology and Developmental Biology
6202 AZ Maastricht, the Netherlands
rpmceulen@gmail.com

Kevin Vernooij, M.D., Ph.D.

Cardiovascular Research Institute Maastricht
6200 MD Maastricht, the Netherlands

1. Eckmann DM, Kobayashi S, Li M. Microvascular embolization following polidocanol microfoam sclerosant administration. *Dermatol Surg* 2005;31:636-43.
2. Regan JD, Gibson KD, Ferris B, et al. Safety of proprietary sclerosant microfoam for saphenous incompetence in patients with R-to-L shunt: interim report. *J Vasc Interv Radiol* 2008;19: Suppl:S35. abstract.

Retraction: Gong Z et al. Injuries after a Typhoon in China. *N Engl J Med* 2007;356:196-7.

TO THE EDITOR: I request that our letter to the editor, "Injuries after a Typhoon in China,"¹ be retracted because much of it was previously published in Chinese journals.^{2,3}

Zhenyu Gong, M.P.H.

Zhejiang Center for Disease Control and Prevention
Hangzhou 310009, China
87235011@163.com

1. Gong Z, Chai C, Tu C, Lin J, Gao Y, Qui Y. Injuries after a typhoon in China. *N Engl J Med* 2007;356:196-7.
2. Gong Z, Chai C, Tu C, et al. Epidemiologic study of the present status of injury to the population caused by typhoon Yunna. *Natl Med J China* 2005;85:3007-9. (In Chinese.)
3. Gong Z, Chai C, Tu C, et al. A field epidemiological study on the risk factors of injury caused by typhoon. *Chin J Epidemiol* 2006;27:773-6. (In Chinese.)

Treatment Outcomes in Extensively Resistant Tuberculosis

TO THE EDITOR: Extensively drug-resistant tuberculosis, which is defined as tuberculosis that is resistant to rifampin, isoniazid, a fluoroquinolone, and a second-line injectable agent, poses a major challenge for global health.¹⁻⁴ There are few published data from studies comparing treat-

ment outcomes for patients with extensively drug-resistant tuberculosis with the outcomes for patients with multidrug-resistant tuberculosis, which is defined as tuberculosis that is resistant to at least isoniazid and rifampin.

Among a series of 205 consecutive patients