verse effects, FDA staff issued an encouraging “approvable” letter in February 2006. But when an advisory committee reviewed the evidence in June 2007, it voted unanimously against the drug. Soon thereafter, the manufacturer withdrew its application.

The agency is now addressing yet another follow-on drug as the glitazone story evolves. In 1997, the first entry in this class of antidiabetic agents, troglitazone (Rezulin, Parke-Davis), was observed to cause fulminant hepatic necrosis, sometimes fatal. Regulatory authorities throughout the world quickly concluded that the product had an indefensible risk–benefit ratio, and it was withdrawn from the market, often within just a few months of approval. Yet the FDA and its advisory committee were swayed by the arguments of the manufacturer and kept it in use in the United States for 2 years after it had been made unavailable in nearly every other country. Now, a decade later, troglitazone’s younger sibling, rosiglitazone (Avandia, GlaxoSmithKline), has been implicated in raising the risks of congestive heart failure and myocardial infarction, without impressive evidence of a countervailing advantage in clinical outcomes. An advisory committee meeting on July 30, 2007, did not fuel hopes for a new era of data-driven reform. The committee voted, 20 to 3, that rosiglitazone increases cardiac ischemic risk in type 2 diabetes but then recommended, by a 22-to-1 vote, that the drug remain in use. The decision was more suggestive of Rezulin redux (and of Redux) than it was of resolve. Although Avandia has been prescribed widely since 1999, several participants noted that neither the manufacturer nor the FDA had carried out enough safety studies to permit a clear conclusion.

The approval, prescribing, and safety surveillance of prescription drugs involve a complicated mix of science, regulatory law, clinical judgment, business, and politics. It is not easy to ensure that science dominates in such a heady brew, but despite missteps such as the latest move with respect to rosiglitazone, an open model holds more promise for data-driven public decision making than those followed in the energy, finance, and defense sectors, among others. As Congress persists in allowing industry funding to dominate the FDA budget and, many fear, its perspective as well), it will be especially important for the scientific community to remain independent, conduct rigorous analyses, and make its voice heard clearly to ensure that drug-review decisions are driven solely by the data.

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When Doctors Become Terrorists

Simon Wessely, M.D.

We were lucky in London in June. A large car bomb was left just outside a crowded nightclub near Piccadilly Circus, and a second car bomb was parked nearby to catch those fleeing from the first bomb. Neither bomb went off, but if either had exploded, we would have seen casualties similar to those of the Bali nightclub bombings. The following day, two men tried to drive a car loaded with gasoline and gas cylinders into the main terminal of the Glasgow airport but were thwarted by the bollards outside the entrance. One man then set fire to himself, and both were overpowered by police and bystanders. The wealth of forensic evidence left behind in the three cars was sufficient for the police to swiftly detain six further suspects.

British security services are reported to be alarmed because the alleged perpetrators were people not well known to the police and intelligence community beforehand. But that is not what has caught the public’s attention. Seven of the eight arrested are physicians, the eighth is a medical
technician, and all worked for the National Health Service (NHS).

Britain’s tabloid press responded with a predictable rash of headlines (“Doctors of Death,” “Docs of War,” “Deadly Medicine”) and reported the gnomic utterance of an Al Qaeda leader in Baghdad that “those who cure you will kill you.” Whether that has any relevance remains to be seen, but there was a palpable sense of shock that our own NHS could harbor as many as eight people apparently bent on mass murder. The chair of the British International Doctors’ Association called the involvement of doctors “beyond belief.”

But is it? Walter Laqueur, perhaps the foremost scholar of the darkest crimes of the 20th century and the rise of terrorism, first observed that doctors were disproportionately represented among the ranks of terrorists. George Habash, the founder of the Popular Front for the Liberation of Palestine and the man behind the aircraft hijackings of Black September, was a doctor. Mohammed al-Hindi received his medical degree in Cairo in 1980, returning to his native Gaza the following year to form Islamic Jihad. Ayman al-Zawahiri, Al Qaeda’s number-two leader and “spokesman,” is a surgeon.

The alleged involvement of Muslim doctors has come as a double blow to Britain’s Islamic communities, which have been swift to condemn their actions. It is not just the association of religion and terrorism, but as Michael Binyon pointed out in the Times of London, it also insults the pride that Muslims take in the achievements of their golden age, especially in the fields of medicine, surgery and pharmacology. Medicine owes more to Islam than to any other religion or philosophy. It was the great Muslim physicians of Spain and the Middle East who laid the foundations for today’s science; it was the writings and medical observations of scholars such as Ibn Rushd (Averroes, as he was known in Europe) and Ibn Sīna (Avicenna) that led directly to the medical advances of the past nine centuries.

But Muslim doctors are certainly not the only ones who have become involved in terrorism. Ikuo Hayashi, a distinguished Tokyo physician and chief of circulatory medicine at a leading Japanese hospital, pleaded guilty to planting sarin gas on Tokyo subway trains. Radovan Karadžić, still to answer for the terror and genocide of Srebrenica, is a psychiatrist.

Perhaps the question should be reversed. Why should doctors not be terrorists? In general, it is not the downtrodden, poor, and illiterate who rise to the top in many organizations, whether legitimate or criminal. Doctors are often intelligent, dedicated, hardworking, ambitious, and of high status, so it should be no surprise that they, alongside bankers, lawyers, engineers, and teachers, tend to reach leadership positions in many terrorist organizations. Should we therefore be any less surprised that a medical doctor could become a prime minister of Norway, a U.S. senator, or a British foreign secretary than that a doctor could rise to power in the Popular Front for the Liberation of Palestine or Al Qaeda?

Clearly, though, there is more to explain. Ambition and the pursuit of power are needed to rise to the top of any organization, but once there, why do some use their position to further their political goals legitimately while others embrace terror and murder?

Ideals and ideology play a large part. Many doctors are driven by a sense of altruism to work in
refugee camps, war zones, and disaster areas, their sole intention being to help the sick they see in front of them. But one can be motivated by a similar sense of idealism to wish not only to heal the individual patient but also to right the injustices that have produced the sickness, wounds, and death. The line has been crossed when the desire to change the world for the better becomes detached from any consideration of the consequences of one’s actions for other people, when legitimate political action is replaced by the belief that the end justifies the means, and when righting injustice becomes confused with seeking revenge.

And some of the qualities that can make one a good surgeon or public health physician can become perverted. Medical metaphors were used to justify every stage of the Nazi genocidal campaign against the sick, the mentally ill, and the racially impure. Nazi discourse repeatedly described the Jew as a bacillus, an infection that needed to be eradicated from society, or as an abscess on the German body political that only surgery could cure. Along with all the professions, doctors were enthusiastic supporters of National Socialism, but many also played a central part in the justification and execution of genocide.

It is possible to advocate and indeed participate in terror and murder only if one is able to distance oneself from the consequences of one’s actions. Doctors need some mastery or control of emotions in the face of suffering; otherwise, it would be impossible to function. But for Professor Werner Heyde and Dr. Paul Nitsche to run the Nazi T4 program for the murder of the mentally ill required that they turn their backs on their humanity and dehumanize those earmarked for destruction. Al-Zawahiri may believe that his actions are in the long-term interest of the wider world of Islam and that this alone justifies mass murder. When Dr. Karl Brandt faced the hangman after being convicted at Nuremberg for his role in murder and perverse medical “experiments,” he showed neither remorse nor insight and continued to believe that his actions had been justified by the need to save Germany from those whose “lives were unworthy of life.”

An idealistic doctor can indeed become fixated on disease and its eradication, and there are times when even obsessive single-mindedness can serve a useful purpose. But danger lurks if that single-mindedness is not tempered by empathy for the plight of the individual. If the doctors now in custody are indeed judged to have planned mass murder on the streets of London, this is a failure not of medicine but of humanity. For once a doctor loses that, then as Sherlock Holmes told Dr. Watson, “When a doctor does go wrong, he is the first of criminals. He has nerve and he has knowledge.”

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