

## COMMENTARY

# *Lights and shadows of vaccinations*

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As a doctor and as a pupil of Albert Sabin, a renowned virologist, my initial attitude towards the risks associated with vaccination was aligned with official Science — a price that was painful but still needs to be paid to advance medicine and human welfare. Then, through studying the trend of the epidemic in relation to the supposed benefits of vaccines, analyzing some clinical cases and — last but not least — being part of the Italian National Bioethics Committee (which has drawn up its certainly most famous report in 1995), I developed a set of beliefs that led me here. However, in this report, I shall not address the scientific aspects and doctors who have blunted the pretense of the so-called scientific and medical community, to entrust the defeat of any infectious disease by vaccination. Instead I wish to focus on some issues which I hope will enrich the interesting debate that will certainly be raised by the reports that follow.

In Italy, the ruling of the Constitutional Court, Law 107 of April 2012, which recognizes the right of compensation for damage caused by vaccines, even when not required, but merely "recommended", undoubtedly highlights the responsibility of prevention campaigns, stressing that they can determine their own choices that are not definable as free and informed.

What it means, in fact, is whether the choices are "free and informed" in immunization when — as proposed by numerous associations — it is not expected to develop a preliminary test for each vaccine to determine the possible vulnerability of the individual to the active ingredients and / or other ingredients? Or when you do not see their parents going to vaccinate their children for the "leaflet" that must report any contraindications of the vaccine to be administered? And what is the title that dominates the form to be signed at the time of vaccination when the media, often with the support of renowned doctors, are dripping the alarmism front of "avian flu" or even more evanescent "biological weapons" in possession of terrorist groups? Informed consent. It seems almost an ironic and hypocritical invitation to the "game aware" that accompanies the advertising of many lotteries which now more and more people rely on the hope of resolving their future, put in doubt by an unprecedented economic crisis.

Meanwhile, there is also the grave phenomenon of false certifications that many complacent pediatricians draw up, in favor of resisting when they are not even the doctors themselves, to advise parents not to vaccinate their children. And unfortunately these are not

isolated cases when you consider that, according to data from the Institute of Health, the percentage of delays in vaccinations exceed 50 percent in some regions. It should also be said that the most serious breaches are covered by the state, whereas the vast majority of health units have never put in place a cross-check between the vaccine and lists of those registered, to expose such defaulters.

This attitude of the medical and public health reveals a substantial hypocrisy in not wanting to deal with a problem which, thanks to the widespread scientific ignorance that still characterizes Italy, ended up finding space only in quarrelsome talk shows; a scientific ignorance certainly to be charged, in addition to a medical information financed 90% by the pharmaceutical industry, to the lack of enforcement of Law 210 of 25 February 1992 which required to implement, within six months, public information by a draft about the possible risks of vaccination.

According to this situation, frankly grotesque, it is the refusal of health personnel of the Hospital Cotugno in Naples, one of the most important Italian centers for Infectious Diseases, to submit, in 2009, to the now infamous vaccination against the influenza virus A H1N1. This is a choice that –has not incited me despite being Chief for over thirty years in that structure. Although I would be in good company, considering that, according to investigations by journalists, half of the family doctors have refused to vaccinate their patients and only 40% of them are vaccinated (a percentage that among hospital doctors falls to 10%).

The relationship between vaccinations and doctors, and between doctors and patients, has changed.

As it is known, for a long time, people who refused to undergo (or subject their loved ones to) vaccinations, were tipped as scoundrels who, like the tax

evaders, took advantage of the "herd immunity" created by the great mass of those who were vaccinated. The people that contrasted the "certainty of Science" received allegations of irresponsible attitude (in some cases charges of defamation and spreading false information) that for many years have left in isolation those (often, to have had some member of the family devastated by vaccines) that fought against health terrorism which claimed to extend dramatically vaccinations. Then, little by little the motion against Health entrusted immunoprophylaxis was attended by a growing number of doctors and researchers, who have also conquered space in the courtroom.

The race for vaccinations that is experiencing the West showed a progressive "medicalization" of problems, that social and political concerns come before health concerns. This is the case of the Project GAVI (Global Alliance for Vaccines and Immunization).

According to estimates by the World Health Organization, in the world there would be more than three billion people infected with one of the three most common agents, that is, the *plasmodium malariae*, the *mycobacterium tuberculosis* and the acquired immunodeficiency retroviruses. 90% of these infections are concentrated in poor countries, with incomes of less than \$100 per year; the estimates of mortality are consequential, about 5 million deaths each year. The realization of the AIDS vaccine is still far. For malaria, in 2009 the enthusiasm (and \$300 million) raised by the research of Joe Cohen vanished, then it is all a succession of announcements and subsequent disappointments (the last hope — or illusion? — called RTS). For tuberculosis, however, there is a whole series of vaccines that are considered as "effective". The first, the "Vaccine Maragliano", goes back even to 1915, then there was the BCG, developed by

Calmette and Guerin in 1921, and then there were vaccines derived from genetically modified organisms, as MVA85A, created in 2002. At this point it is right to wonder why, with so many vaccines available, tuberculosis is globally not regressed, but instead we see increased cases, even to the extent of becoming endemic in areas which seemed spared from this calamity until a few years ago, such as Costa Rica.

The answer is of disconcerting evidence: the economic crisis, the wars, the hoarding of fertile lands and the consequent exodus of millions of desperate people who go to live in the slums of the big cities are spreading furthermore this infection that, as recently reported by the World Health Organization, is experiencing a growing drug resistance. Nevertheless, the response of the powerful countries of the earth to this threat is called Project GAVI. It was officially launched in Davos during the World Economic Forum, but despite having private sponsors such as Children's Vaccine Program Bill, Melinda Gates Foundation, the World Bank, the IFPMA (International Federation of Pharmaceutical Manufacturers) and Rockefeller Foundation, it will drain from the states (and citizens) more than 15 billion dollars for inscrutable "research" to produce vaccines in the next several years. All this is topped by the inevitable posters and pamphlets to persuade passers-by to open the purse strings for scalable "offers" from income tax returns.

Overall, a striking phrase, "GAVI: TB can be defeated" and a row of African children, well-fed and smiling, in front of a good-humoured doctor ready to vaccinate, paints a picture of the success of the project.

Another element of reflection on vaccinations is their correlation today to recur constantly in the media to anxiety and psychosis, such as those triggered by

"bio-terrorism" fear. This threat is very unlikely, considering the extreme difficulty that would have been encountered today by even a powerful terrorist organization to produce a microorganism capable of thwarting the resources of one health system, however shabby it is. This, among other things, is the opinion of scientists who are certainly qualified on the subject, but who have the misfortune of not being able to feed some business with their opinions. Different luck had, however, "experts" in bio-terrorism who have even theorized that a possible theft of Variola major virus responsible for smallpox. Why these dark terrorists should steal the smallpox viruses from just the two overly armour-plated laboratories (one in Novosibirsk, Russia; the other in Atlanta, USA) where they are kept, rather than use or modify other viruses that are more easily available, is unclear. What is very clear, however, is the "result" of the smallpox alarms: five million doses of smallpox vaccine, purchased from Italy and the 25 million doses of vaccine against the H1N1 virus, have been thrown away or, more hypocritically, donated to the "African countries". Then there are the psychosis of imminent and catastrophic epidemics that regularly dominate the mass media; and we would have to wonder why on earth, with all the infections that keep humanity afflicted, these fears mainly concern the influenza — the infamous "avian flu" and "swine flu", just to mention the last two fears that have recently meandered.

And, incidentally, just for the flu there is a deep-rooted and lucrative vaccination campaign that recurs annually for years. This is a habit very difficult to understand, considering that the vaccine is produced before the start of the flu season, which means that the virus almost never coincided with those tested to produce the vaccine. The result is that 30% or 40% of

those vaccinated will contract the flu anyway. On the other hand, the influenza vaccine causes risk; but if you look for comprehensive epidemiological studies on flu shots or if you would ever understand why, as stated in an official statement, "the influenza vaccination is recommended for people aged over 65 years, for people of all ages with chronic diseases, and certain professional categories", you would wonder at how little room magazines, as well as scientists, dedicate to this topic. This is something I would not believe because the advertisers keep these magazines alive.

However, psychosis of bio-terrorism and impending devastating epidemics ensure the spread of vaccination campaigns. During the war against Iraq in 1991, the Bush administration was able to impose, on all the soldiers, a cocktail of vaccines against biological weapons, not yet approved by the Food and Drug Administration, and containing, among other things, a molecule at issue, the squalene, which is a harmless metabolite of human cholesterol (according to the industry producing the vaccine) but likely responsible for a whole series of diseases now known as Gulf War Syndrome (according to some researchers).

Even worse was the "anthrax threat" to deal with for which, eighty million doses of vaccine had been prepared in the US in 2003. A compulsory vaccination campaign, for which, it must be emphasized, it was not worth any longer the right to a refund of any biological damage, standard established in 1968 by the Federal Court of Appeal in the United States. Indeed, it was precisely this principle in the last decades of the past century to reduce vaccination campaigns (in 1985,

out of the ten vaccine manufacturers on the market 15 years ago, only three are left) and to soften the business.

Today, however, thanks to the agreement signed between the Bush administration and the pharmaceutical companies producing the vaccine against smallpox and anthrax, this principle no longer exists, or almost. And so it starts a great race to produce new vaccines: 197, according to the World Health Organization; 30 percent of these will be placed on the market in the next few years.

A final aspect of vaccinations that I would highlight here is that they, also to be absolutely the same for every person who is subjected to them, suggest a reading of the disease as a mere interaction between microorganisms and human organisms, cutting out the uniqueness of each human being, whose study has made great medical art.

But the individual is not an indistinct biological machine and the infection is not a "war" for which we must protect ourselves by simply dramatically "fortifying" our immune system. If so, the "solution" would end up with the one suggested in some science fiction book (and supported by some news reports of suspected advertisement) — a vaccine against all diseases, to be taken at birth to neutralize each microorganism and secure a long and healthy life. It is not the case. "The microbe is nothing, the soil is everything," as admitted at the end of his life by Louis Pasteur, the founder of modern immunology and medicine. And I believe it is up to the doctor to be given the task of enlivening this land, before any vaccine does.