

EDITORIAL

VACCINATION. YES OR NO?

The universal vaccination programs carried out for decades have managed to eradicate smallpox (1980) and, at least in the countries considered most developed, diseases such as poliomyelitis, measles and diphtheria which once wreaked ravages the child and adult population, have almost been eradicated. The incidence of other, more difficult to control diseases such as whooping cough and tetanus has been markedly reduced. Vaccines against rubella and mumps were later introduced, which are administered together with the measles virus in the form of the MMR vaccine. These vaccines, which can be called classical due to the length of time they have been used, have almost freed humankind of the serious consequences of these diseases, ranging from death in many children to disability in many others (paralysis, endocarditis).

Vaccination programs have recently been complicated by the inclusion of new vaccines that protect against diseases with a lower incidence but which are no less serious, such as those caused by Haemophilus influenzae type b, meningococcus C and hepatitis B; these new vaccines require a greater number of doses and patients must be reminded of when they need their jabs. Hence there is a tendency to simplification through combined vaccines that include up to six distinct antigens. In addition, other vaccines are available which are not compulsory but which are necessary in specific parts of the world or situations (trips, bites, epidemics), such as the vaccines against typhus, rabies, and yellow fever, and also the most recent vaccines against hepatitis A, varicella, influenza and pneumococci.

These two phenomena, the near disappearance of the above-mentioned diseases in the most developed countries and the new vaccines against less frequent diseases that require a greater number of shots or have a mixture of antigens, are some of the reasons why some parents are reluctant to have their children vaccinated. Sometimes this reluctance is due to laziness, as the risk is minimal, and other times it is due to fear of adverse reactions. Added to this is the rise of several social movements that are against vaccination for various reasons, mostly fear of certain risks such as autism, sudden infant death syndrome, diabetes mellitus, and autoimmune or neurological disorders. These fears have been spread by the sensationalist press or media with a hidden agenda but have been thoroughly refuted by rigorous epidemiological studies^{1,2}. Others believe that the use of hexa- or pentavalent vaccines increases the antigen load and sup-

presses the immune system. This, however, is not the case since the combined vaccines reduce the 3,217 antigens administered with separate vaccines to 122³, and consequently the mechanisms involved in boosting immunity through vaccines are not reduced but rather are enhanced⁴.

Others put forward unfounded religious reasons, due to the suspected use of cell lines from aborted fetuses to culture the varicella and hepatitis A vaccines. Their moral arguments are debatable and, as Furton has argued⁵, do not compensate for the risk that objectors' children will suffer from one of these diseases. The rise of alternative and natural medicines (naturopathy) is another reason why some people object to the use of vaccines as they believe that diseases are a violation of natural laws and that medical practices merely suppress symptoms and that consequently vaccines do not reduce diseases – if some have almost disappeared, that is not due to vaccines but rather to better diet and sanitation. Lastly, there are those who believe that only the financial interests of the pharmaceutical industry and medical profession support vaccination.

Given the need for vaccination, convincing arguments should be put forward against these movements to encourage reluctant parents to have their children vaccinated. Those who lack motivation because they believe that there is no longer much risk of suffering from diseases that have almost been eradicated by previous campaigns can be reminded that current trends in immigration, with a marked increase of persons from countries where these diseases persist, has led to the occasional reactivation of some of these infectious processes, especially due to contact among schoolchildren^{6,7}. For other groups, different arguments should be used according to the reasons given for not having their children vaccinated. Beliefs should always be respected but it should be made clear that in the case of illness, those who are harmed are the children who, because of their youth, cannot express their opinion.

Together with personal contact with families, various entities should contribute to make the benefits of vaccines known – health authorities, scientific bodies, the workplace, personalities of high standing in society, and especially the press, which should always promote health and eschew worrying and sensationalist news with no scientific backing⁸.

The Symposium recently held by the Spanish Association of Vaccinology in Barcelona has brought together these concerns and has also constituted a forum for updating prevention through vaccination.

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