

## **European plans for enhanced pharmacovigilance: safety or restraint”?**

Press release from the French National Academy of Medicine

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Nearly a year after the launch of the worldwide alert, the release of effective SARS-CoV-2 vaccines has raised hopes of bringing under control the course of the Covid-19 pandemic. This hope is fragile, however, due to the slowly progression of the vaccination campaign, the low availability of vaccine doses and the emergence of more contagious variants that may reduce the effectiveness of vaccination.

In the European Union, as in many other countries, the launch of the vaccination campaign has been accompanied by the implementation of an enhanced pharmacovigilance plan. The aim of this plan is to identify the side effects already observed in the course of the various vaccines phase 3 clinical trials that preceded their marketing authorization. It also aims to identify any adverse events undetected during phase 3. The analysis of these post-vaccination events is important to determine whether or not their occurrence is linked to the vaccination by a causal relationship, which may lead the Regulatory Authority to question the authorization to use the imputed vaccine.

A rare side effect, not identified during phase 3 clinical trials out of a few thousand people, may only be detected in phase 4, after the vaccine has been marketed (it is then administered to hundreds of thousands, or even millions of people). For example, during the vaccination campaign against the A/H1N1v virus responsible for the 2009 influenza pandemic, cases of narcolepsy, not revealed during clinical trials, were observed with a risk of 1 case in 18,400 doses attributable to this vaccination [1]. When a serious adverse event occurs during a mass vaccination campaign, it may be difficult to refute a causal relationship. For example, when a correlation was found between hepatitis B vaccination (administered to more than 30% of the young adult population in the 1990s) and the incidence of multiple sclerosis in France, the health authority suspended the vaccination program for

secondary school students in 1998, delaying the extension of the vaccination coverage by several years, although no causal link was established [2]. This unfortunate episode led to a lasting loss of confidence in vaccination.

Very recently, some 30 thromboembolic events following the vaccination with AstraZeneca® COVID-19 vaccine were reported to the reinforced pharmacovigilance system in the European Union, causing a great concern among Member States and leading several of them (Denmark, Norway, Iceland, the Netherlands, Germany, Italy, Spain, Portugal and France) to suspend the use of this vaccine in accordance with the precautionary principle.

A detailed epidemiological analysis is needed to determine whether there is a statistically significant link between these events and the administration of AstraZeneca® COVID-19 vaccine and, if so, whether to investigate a causal relationship that could alter the benefit-risk balance and lead to reconsider the approval of this vaccine licensing.

While the resurgence of Covid-19 in European countries requires an intensification of the vaccination campaign, the suspension of the AstraZeneca® COVID-19 vaccine, even for a short period of time, motivated by a weak signal of uncertain significance, compromises the dynamics of this mass vaccination still in its infancy and reinforces vaccine hesitation. In order to ensure that pharmacovigilance, a central element of the health safety of this campaign, does not become an irrational brake, **the French National Academy of Medicine recommends**

- to inform the general public about the functioning and organization of the reinforced pharmacovigilance plan set up at the launch of the national vaccination campaign;
- to encourage health professionals and individuals to report any adverse event occurring after vaccination;
- - to improve the sensitivity of the post-vaccine adverse event detection system, which is currently passive, by supplementing it with a proactive component involving systematic requests (by e-mail or SMS) to vaccinated people [3];
- to subject recourse to the precautionary principle to a preliminary and objective study of the benefit/risk ratio of vaccination.

1.Sarkanen TO et al. Incidence of narcolepsy after H1N1 influenza and vaccinations: Systematic review and meta-analysis. Sleep Med Rev. 2018; 38: 177-86.

2 AFSSAPS. Pharmacovigilance review and safety profile for hepatitis B vaccines "No new data call into question the benefit of vaccination", February 2012.

3 Press release of the National Academy of Medicine "To succeed in the national vaccination campaign against Covid-19, let's not forget the electronic vaccination record", December 3, 2020