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Background and importance

National recommendations mentioned to vaccinate against COVID-19 patients at risk of allergy after referring them to allergologist.

- Are concerned
- patients with suspected allergy to one of the vaccine's component (polyethylene glycols (PEG) and polysorbates)
 - patients with history of immediate reaction to a first injection of an mRNA vaccine)

Patients at risk were referred to the pneumology - allergology unit for investigation.

Aim and Objectives

The purpose of this monocentric retrospective study is to assess positive skin tests, and anaphylaxis reaction during vaccination after allergological work-up.

Material and Methods

For any tested patient, pharmacy extemporaneously prepared Prick Test (PT) and Intradermal Tests (IDT)

Component	Concentration	PT	IDT
PEG 400	100mg/mL	1:1	1:10, 1:100, 1:1000, 1:10000, 1:100000
PEG 4000	100mg/mL	1:1	1:10, 1:100, 1:1000, 1:10000, 1:100000
Polysorbate 80	0,4mg/mL	1:1	1:10, 1:100, 1:1000
Comirnaty® vaccine	30µg/0,3mL	1:1	1:10



Were collected :

- Patients characteristics
- Tests results
- Indications of allergological work-up



Vaccination allowed if negative skin tests



Patients were systematically called by the pharmacist after vaccination to know:

- The vaccine name and the number of doses
- If there were premedicated

And to assess side effects including anaphylaxis

Skin tests readings occur at 20 minutes

Results

Between February 1 and August 31 2021 :

49 patients were tested :

- Mean Age : 54.5 years old (yo)
- Standard deviation: 17.8 yo
- Female : 81.6 %

7 positive skin tests

3 had an immediate reaction

1 patient to PS80 PT + Vaccine IDT 1:10

2 patients to vaccine IDT 1:10

Contraindicated

4 had a delayed reaction

4 Vaccinated

42 negative skin tests

35 patients were vaccinated (85%)

No anaphylaxis reaction

7 did not answer to the call

Among those 49 patients :

20 were tested after a reaction to Comirnaty® vaccine

29 were tested for a suspected allergy to an excipient

19 after a first dose

1 after a second dose

For patients who responded to the call (n=39)

All but one patient were vaccinated at Comirnaty® vaccine

82% (32/39) of patients received their second dose of vaccine

31% (13/39) of patients were premedicated (started 2 days before vaccination for 38% of them (n=5))
 ↳ 30,8% Desloratadine - 15,4% Levocetirizine - 30,8% Cetirizine - 7,7% Ebastine - 15,4% Bilastine

No patient had an allergic reaction after vaccination and were reported as reactions for 13 patients: headache (n=4), rashes (n=2), sensation of laryngeal oedema (n=1), pharyngeal gene (n=1), hot flash (n=1), swollen lips (n=1), lipothymia (n=1), reflex syncope (n=1), palpebral angioedema (n=1)

Conclusion and Relevance

Positive ST to the vaccine are rare (6%). No patients had simultaneously positive ST to the vaccine and PEG. Those results may suggest that the exact predictive positive value remain uncertain and that IDT to the vaccine might be irritating.