Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

524 Urticarial and Eczematous Eruptions Following mRNA COVID-19 Vaccination in Patients With and Without Chronic Urticaria and Atopic Dermatitis

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RATIONALE: Information regarding urticarial/eczematous eruptions following mRNA COVID-19 vaccination and their incidence in Chronic Urticaria (CU) and atopic dermatitis (AD) are needed to guide vaccination strategies.

METHODS: We reviewed patients referred to allergy/immunology clinic for post-vaccination isolated urticaria (n=13) or eczematous dermatitis (n=6) and patients established in the same clinic with omalizumab/dupilumab prescriptions for CU (n=67) or AD (n=7).

RESULTS: Among referred patients, 12 reported urticaria starting 0-19 days after 1st dose. Four had pre-existing history of urticaria/angioedema/pruritus. Seven patients received 2nd dose without recurrence. Two received 2nd dose and developed urticaria: one has ongoing acute intermittent urticaria, one had worsening of baseline chronic pruritus. One developed CU, started omalizumab, and declined 2nd dose. Two were lost to follow-up. Four patients (3 without AD, 1 with) reported eczematous dermatitis 0-5 days following 1st dose: 2 received 2nd dose and 1 received non-mRNA vaccine without recurrence, 1 declined. Three patients tolerated 1st dose but reported urticaria (n=1) or eczematous dermatitis (n=2) following 2nd dose.

Among established patients, 8% (4/51) of CU patients on omalizumab reported CU relapse after 1st dose (n=1) or 2nd dose (n=3) and required omalizumab dose/frequency increase. Sixteen CU patients holding or planning to start omalizumab did not experience worsening urticaria/angioedema. Seven patients prescribed dupilumab did not report worsening AD after vaccination.

CONCLUSIONS: Urticarial/eczematous eruptions occurred following mRNA COVID-19 vaccination in patients with and without CU/AD and were not impediments to receiving subsequent doses when symptom control was adequate. Large-scale studies are needed to further characterize these manifestations and refine vaccine guidance.

525 Patients with Pseudoallergic Reactions Following COVID-19 Vaccination are Able to Tolerate Subsequent Dosing

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RATIONALE: Messenger RNA (mRNA) based vaccines have proven to be a critical tool to combat the COVID-19 pandemic. While most patients tolerate them without adverse reactions, a small number have reactions concerning for mast cell degranulation. These reactions are poorly understood, and so there is little data to guide counseling on the safety of repeat vaccination.

METHODS: The Washington University Division of Allergy and Immunology conducted a retrospective chart review of 82 patients referred with concern of adverse reaction following COVID-19 vaccination. We analyzed the history of these patients and the characteristics of their reactions, as well as if they tolerated repeat vaccination.

RESULTS: Sixteen (20%) patients presented with delayed hives/angioedema after initial vaccination, without immediate symptoms. The average time to reaction was 43 hours. This group was predominantly female with an average age of 46 years. While 58% had a history of atopic disease, only 12.5% had a history of chronic hives and no patients had a history of mast cell activation. Nine had confirmed repeat vaccination with the same product and 8 did well or did not return to care. One patient experienced a self-limited recurrence of her reaction.

CONCLUSIONS: Delayed hives/angioedema following COVID-19 mRNA vaccination can occur. Even though these delayed reactions may be mast cell mediated, they appear to be idiosyncratic, possibly due to immune overactivation. Completion of the vaccine series as well as any future boosters is not definitively contraindicated.

526 Evaluating Iodixanol as a safe alternative in iodinated contrast hypersensitivity reactions

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RATIONALE: Prevalence of hypersensitivity reactions to iodinated contrast media is around 0.5-3%. According to European and American practice guidelines, allergy tests should include skin tests followed by drug provocation test (DPT) with a non-related radiocontrast media (RCM) with or without premedication use.

The aim of this study is to evaluate the use of iodixanol as alternative to another or unknown culprit RCM

METHODS: We performed a retrospective analysis of the patients that underwent a DPT from 2019 to 2021 in our practice. Demographic data and results from skin tests (prick and intradermal) with Iomeprol and Iodixanol and DPT were extracted from electronic health records. DPT was performed with an alternative culprit RCM in most cases (based on specialist decision) without premedication.

RESULTS: A total of 258 patients were recruited. The culprit RCM was unknown in 115 subjects, Iomeprol was involved in 137, Iodixanol in 4 and Iohexol in 2.

Skin tests with Iodixanol were negative in 239 subjects. Out of these, 151 received Iodixanol in DPT and 90% had a negative challenge. Five suffered acute reactions (3 grade 1, 1 grade 2 and 1 grade 3; no fatalities) and 9 had non-immediate reactions (all required medication; no hospitalization needed).

CONCLUSIONS: Our data shows Iodixanol could be a safe alternative in case of hypersensitivity reactions to other RCM without the need of premedication since it was tolerated by 90% of patients. Nevertheless, physicians should always be aware of the possibility of unavoidable acute reactions during DPT.