

Use of Omalizumab in Chemotherapy Desensitization Protocols

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OBJECTIVES

The purpose of this study was to analyze how omalizumab was being used in our hospital to expand the tolerance of desensitization protocols (DSP) and whether it was being effective.

CONCLUSIONS

Using omalizumab allowed successful administration of docetaxel and platinum-based chemotherapy. Even though it is not clear which omalizumab regimen for DPS is the most efficacious, these results suggest that a protocol which shortens omalizumab frequency based on tolerance may improve outcomes.

MATERIAL AND METHODS

- Data:** collected from a tertiary hospital electronic record to find patients that had undertaken a DSP and were given omalizumab.
- Population:** all patients had previously failed a 16-step DSP using as premedication at least dexamethasone, acetylsalicylic acid, dexchlorpheniramine and montelukast; and were then prescribed two doses of omalizumab every 15 days before administering another 16-step DSP then continuing either fortnightly or every monthly **as per tolerance**.
- Variables:** culprit drugs, doses and frequencies of omalizumab, level of tolerance achieved, number of DSP undertaken, and allergy tests used for diagnosis, i.e. intradermal (IDT) or prick (PT) test.

RESULTS

Patient allergy characteristics

Eight patients were found, who were allergic to the following culprit drugs:

- ✓ 4 to oxaliplatin, with a positive PT, a positive IDT, a cytokine release syndrome, and a mixed phenotype.
- ✓ 2 to carboplatin, with a positive PT and IDT, respectively.
- ✓ 1 to docetaxel with a positive PT.
- ✓ 1 to rituximab with a positive IDT test

DPS tolerance

- ✓ Three of the patients who were taking **platinum-based chemotherapy** tolerated the DSP without incidences, whilst another had its. One patient was switched to an every-monthly regimen after the third omalizumab dose and experieinfusion stopped to treat an itchy erythema and was restarted afterwards without incidencesnced a gradual development of tolerance from generalized rashes in the first infusion to no incidences from the fourth DSP onwards. **Only one patient on oxaliplatin did not tolerate the DSP.**
- ✓ The patient on **docetaxel** completed the DSP with mild cutaneous symptoms which self-resolved after the infusion was finished.
- ✓ The patient allergic to **rituximab** refused continuing the DSP when developing itchy skin rashes even though they were deemed controllable.

