PRIVATE PRACTICE EXPERIENCE WITH OMALIZUMAB FOR CHRONIC URTICARIA

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ABSTRACT

Abstract for AAAAI Poster #639: Private Practice Experience with Omalizumab for Chronic Urticaria
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RATIONALE:
Omalizumab has been approved by the FDA for the management of chronic urticaria.We report a two provider single private experience with Omalizumab from 1/14 to 7/19 for this indication.
METHODS:
We performed a de-identified retrospective review of the utilization and efficacy of omalizumab 300mg a month for chronic urticaria and/or angioedema unresponsive to high dose antihistamine and Montelukast x6 weeks as indicated by urticarial control test ,patient history and /or exam.
RESULTS:
There were 55 patients :8(15%) males and 47(85%) femalaes,41 Caucasians(75%),5 African Americans(10%)and 9%Hispanics with age range 19to91 years,mean72 years,median 56 years.Their histories of urticaria and /or angioedema ranged from 5months to 30years with a mean of 3 years and median 6.3years with duration of Omalizumab 1month to 6years ,mean 3 years median 1.7years.There were 69% of patients who were urticaria and /or angioedema- free on only Omalizumab for a range of zero to 5.6 years ,mean of 1.3 years median 1year.4 (7%) of patients failed taper offered if one year free of urticarial or angioedema and returned to control with Omalizumab 300mg every 4weeks whereas 4 patients (7%) discontinued Omalizumab after at least 1 year and ¾(75%)of the patients continued on no medication with ¼ (25%)patients on intermittent Allegra 180mg urticarial free after at least 2-15 months.4(7%) patients failed to respond to Omalizumab for at least 1.5 years with continued urticaria despite high dose antihistamines and Montelukast requiring systemic steroid bursts for control.Response to Omalizumab usually occurred within 12months.
Conclusions :
Omalizumab 300mg monthly was effective usually within 12 months in abolishing or at least controlling chronic urticarial and /or angioedema alone or with antihistamines in up to 69% of patients failing antihistamines and Montelukast.

I. INTRODUCTION

Omalizumab is a humanized IgG1kappa monoclonal antibody that binds specifically to FcEpsilon 3 domain of unbound IgE and inhibits IgE binding to the high affinity FcEpsilon RI receptor on mast cells and basophils. Omalizumab inhibits the inflammatory pathway mediated by IgE without enhancing degranulation (1). In 2014, omalizumab was approved for therapy in children ages >/=12years and adults with chronic urticarial defined as at least 6 weeks in duration not controlled with H1-antihistamines. The 300mg dose monthly achieved a primary outcome of 70% decrease in itch severity over 12 weeks versus 40% with placebo. Since 44 - 53% of candidates with chronic spontaneous urticaria experience angioedema by extension, omalizumab therapy of such candidates is also efficacious in decreasing the episodes of angioedema (2).

A real-life study of omalizumab demonstrates efficacy and safety in 'complex' patients with comorbidities including cardiac, metabolic, oncologic, infectious, allergic, immunologic and psychiatric diseases (3). Obesity, elevated C3, arterial hypertension and CRP may be factors in increased resistance to omalizumab (4). We report in a single private practice real life experience with efficacy and safety in candidates with spontaneous urticaria and / or angioedema over 12 months. A retrospective chart review of 43 chronic urticarial patients with omalizumab between 2006 - 2015 reports that 90% (37/41) responded in 3 months (5-6). Cost effectiveness for CIU awaits home administration (7). Pediatric guidelines for CIU management with omalizumab have been issued by Italian allergy specialists (8).

II. METHODS

We performed a de-identified, retrospective review of our two-provider private practice utilization and efficacy of omalizumab 300mg a month for chronic urticaria and / or angioedema. As approved by the FDA, omalizumab is designed for urticarial and / or angioedema intractable to high dose antihistamine and montelukast sodium x 6 weeks as indicated by urticarial control test, patient history and / or physical exam.

III. RESULTS

We reviewed 55 patients over a 5.5 year period between January 2014 and July 2019. Our candidates comprised 47 (85%) females and 8 (15%) males of which 5 were African American (10%), 9 were Hispanic (16%) and 41 were Caucasian (75%). Patients' age range was 19 to 91 years with a mean of 72 years and median of 56 years. Thirty-four patients (62%) had a history of atopy and eleven patients (20%) had a history of asthma. Our patients also had a history of urticaria and / or angioedema with a range of 5 months to 30 years with a mean of 3 years and median of 6.3 years. They were on omalizumab for a range of 1 month to 6 years, mean 3 years and median 1.7 years. Thirty-eight patients (69%) had been on omalizumab exclusively for a range of zero to 5.6 years, with a mean of 1.3 years (16 months) and median of 1 year (12 months). Three patients (5%) failed taper and returned to control with omalizumab 300mg every 4 weeks whereas 4 candidates (8%) tapered off omalizumab for periods of 2 to 12 months. Of those patients, three (5%) are asymptomatic on no medication x2 - 12months but one patient (2%) continues to experience periodic urticaria which either self-resolves or responds to minimal antihistamine, fexofenadine 180mg x1 dose. Four candidates (8%) failed omalizumab therapy after at least 18 months to 2.5 years and have responded only to systemic steroids. Response to omalizumab usually occurred within 12 months. Two other candidates with highly elevated IgGantiIgE did not respond to conventional dose 300mg a month for 6 months or 450mg q4 weeks x3 months.

TABLE 1
DEMOGRAPHICS
Total: 55 patients

AGE			SEX		RACE			ATOPY	ASTHMA
Range	Mean	Median	F	M	African American	Hispanic	Caucasian	N %	N %
19 – 91y	72	56	47	8	5	9	41	34 (62%)	11 (20%)

TABLE 2
OMALIZUMAB THERAPY

Successful outcome without urticaria

YEARS URTICARIA			YEARS OMALIZUMAB			YEARS WITHOUT URTICARIA ON OMALIZUMAB 38/55 PATIENTS (69%) 8 PATIENTS (15%) IMPROVED URTICARIA		
Range	Mean	Median	Range	Mean	Median	Range	Mean	Median
5m - 30y	3.0y	6.3y	1m - 67m	3y	1.7y	0 - 66m	1.3y	1.0y

TABLE 3
TRIAL UPDOSING and TRIALS OFF UPDOSING

TRIAL OFF	TRIAL UPDOSING		FAILURE ON OMALIZUMAB
Failed	Successful	Failed	After 18mo – 2.5y
3 (5%)	4 (8%) 3 (75%) No symptoms (2m – 12m) 1 (25%) Periodic symptoms	2 / 2 (100%) 450mg q4wk	4 (8%)

IV. DISCUSSION

Response to omalizumab is noted in 70% of patients with CSU within the first week of treatment (9) and is related to IgE autoantibodies (10). Less optimal or a more delayed response is noted with positive diagnostic tests for Type II B Autoimmune CSU including autologous serum skin test and basophil histamine (9, 11). In contrast, failure to respond is related to low baseline total IgE and no alteration in the total IgE within 4 weeks following the first injection (10, 12) and low baseline levels of Fcepsilon RI on basophils (11, 13). The same reviewer (14) cites evidence that updosing may be helpful in those patients with partial or no response to 3 - 6 doses of 300mg of omalizumab. Control of disease is achieved in 13/18 with CSU (77%) with 450mg dose and 13/22 patients (59%) with 600mg dose (13,15,16), though our experience with two patients with high antiIgE with 450mg dose every 2weeks indicated there was no improvement in efficacy.

Omalizumab has a good safety profile and is approved for self-administration in other countries. Evidence for omalizumab efficacy indicates significant enhancement in disease activity and quality of life (12, 17 - 18).

V. CONCLUSION

in this single center, two-provider private practice retrospective study, Omalizumab 300mg monthly is effective in abolishing or at least controlling chronic urticaria and / or angioedema alone or with antihistamine in up to 69% of candidates not controlled with high dose antihistamines and montelukast, usually within twelve months. Tapering off omalizumab was tolerated without recurrence of urticaria by one candidate (2%) and another candidate (2%) has eliminated omalizumab with only periodic urticaria that is self-limited or responsive to a single dose of antihistamine. Two of our patients (4%) had no response to omalizumab over at least 6 months. Two other candidates (4%) with highly elevated IgGantiIgE did not respond to conventional dose 300mg a month for 6months or 450mg q4 weeks x3 months.

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