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552 Covid-19 in outpatient and inpatient Asthmatics in Lebanon: Real-life experience

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RATIONALE: COVID-19 cases were identified in Lebanon in February 2020 during severe political and economic unrest. The prevalence, treatment and outcome of asthmatics, a population at risk, presenting with COVID-19 were evaluated in an outpatient Allergy/Immunology clinic affiliated to a Tertiary Medical Center.

METHODS: Data was collected using electronic medical records of patients hospitalized for Covid-19 at Hotel-Dieu de France hospital (HDF), and of outpatients in an affiliated Allergy/Immunology clinic from March 1st, to July 15, 2021. Clinical features, treatment and outcome were analyzed.

RESULTS: Confirmed national number of COVID-19 cases during the study period was 549417, among them 390 were admitted to HDF including 25 (6.41%) asthmatics. Prior to infection, 68% were on controller treatment. Asthmatic inpatients received intravenous corticosteroids and oxygen therapy (100%), antibiotics (72%), remdesivir (16%), tocilizumab (12%) and 12% needed intubation. Mean hospitalization duration was 12.2 days with one reported death.

A total of 164 outpatients among 820 consultations reported having Covid-19 infection, 41 (25%) were asthmatics, 1.22% with severe asthma on ongoing omalizumab. Covid-19 infection was mild in most outpatients, one severe case needed hospitalization and all continued their baseline treatment during the infection.

CONCLUSIONS: This study has shown an asthma point prevalence of 6.41% among Lebanese patients hospitalized for Covid-19 infection. Preliminary results showed a mild to moderate outcome in most Covid-19 Asthmatic outpatients followed in a specialty clinic, with complications not greater than the normal population.

553 Difficult to Control Asthma During COVID-19 Lockdown

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RATIONALE: Due to COVID-19 pandemic, patients with asthma have been severely affected. We have collected medical records and evaluated clinical characteristic of asthmatic patients in a referral center during lockdown.

METHODS: From 1507 OPD visits to Allergy Immunology Center, between January to July 2021, 241 visits were asthma related. We investigated all asthma cases and stratified according to disease severity. Board-certified physicians conducted the history taking and physical examination during the visits. We collected demographic and treatment data from those continue to come for regular follow-up. These information were analyzed and compared to data during country lockdown.

RESULTS: One-hundred-thirty asthma cases were identified. Eight-seven had come to OPD before and during lockdown period. Twenty-nine patients (22%) lost follow-up. In study group, the average age was 62 +/-15.3 years. Seventy-one percent were female. More than 80% had allergic rhinitis. Other comorbidities were sinusitis (16.1%), nasal polyps (12.6%), urticaria (9.2%), aspirin sensitivity (5.7%) food allergy (1.1%) and atopic dermatitis (2.3%). The subjects in low, medium and high inhaled corticosteroid treatment were equally distributed. Thirty-eight percent had COVID-19 vaccination. None of them had SARS-CoV-2 infection during study period. They were 74.7% of well and 25.3% partly controlled patients before lockdown. Neither acute exacerbation nor poor control case was found. The medication prescribed before and during lockdown were not statistically different. During lockdown, we identified 9.2% of

uncontrolled asthma with 4.6% of acute exacerbation. Three quarters of asthma exacerbation were in severe asthma group (p=0.07).

CONCLUSIONS: In our institution, uncontrolled asthma were increased during COVID-19 lockdown.

554 Changes in remote care adoption for asthma during the COVID-19 pandemic

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RATIONALE: The COVID-19 pandemic led to greater adoption of remote care. We sought to understand which remote tools patients with asthma used and their perceived value.

METHODS: Patients using a digital self-management platform (Propeller Health) were invited to complete a 15-item survey between April and May 2021. Eligible patients (>18) had self-reported asthma and resided in the US. Patients reported which remote care tools and monitoring devices they used, how helpful their remote care was, and any related concerns. Responses were aggregated and descriptive statistics reported.

RESULTS: 441 patients completed the survey: 74% (313/421) female, 80.3% white (338/421), and 10.0% black (42/421). 10.0% (42/421) reported high school as their highest degree achieved, and 23.6% (100/421) reported household incomes >\$100k. Patients connected with their asthma provider via video (38.7%, 167/431), phone (36.2%, 156/431) or messaging portal (32.3%, 139/431). 68.7% (224/326) found their remote care helpful, but some reported concerns including: quality of care (31.4%, 134/427), communication effectiveness (25.8%, 110/427), provider availability (18.7%, 80/427) and technical/access issues (16.2%, 69/427). Patients reported using home oximetry (20.2%, 66/326), heart rate (17.8%, 58/326), and spirometry (13.2%, 43/326) devices. 19.9% (65/326) used online prescriptions services.

CONCLUSIONS: Patients used a myriad of remote tools for their asthma during the COVID-19 pandemic, and were generally satisfied with remote care. Remaining concerns about quality, access and availability should be addressed.

555 Feasibility of capturing self-reported asthma exacerbations with a digital self-management platform

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RATIONALE: Reduction of exacerbation risk is a primary goal of asthma care. We sought to assess the feasibility of collecting self-reported asthma-related exacerbations in patients using a digital self-management platform for asthma.

METHODS: Patients with asthma who enrolled with the digital platform (Propeller Health) were invited to complete a monthly in-app questionnaire on acute asthma care from March to May 2021. Patients self-reported if they had received any additional treatment (additional medication and/or acute care) in the last 30 days for worsening asthma symptoms, including: a prescription for a steroid, an emergency department (ED) visit, and/or an overnight hospitalization. Survey feasibility was assessed using descriptive statistics.

RESULTS: 259 patients with asthma responded to the survey, with 34, 139 and 86 patients responding in March, April and May, respectively. Mean (SD) patient age was 47 (13) years, and mean (SD) time enrolled with the digital platform was 19.5 (12.6) months.

CONCLUSIONS: Monthly self-report surveys may be a feasible way to capture acute care events in a digital platform for asthma, and may offer useful information for healthcare providers to review and adjust treatment as necessary. Examination of concurrent patterns of short-acting beta-agonist use as it relates to self-reported exacerbations may support early prediction of symptom worsening in patients with asthma.