

PREVALENCE OF UNDIAGNOSED CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) AND ASTHMA IN UNDERSERVED RURAL SINDH, PAKISTAN.

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PURPOSE	RESULT	CLINICAL IMPLICATION
<p>THERE ARE AN ESTIMATED 300 MILLION CASES OF COPD WORLDWIDE. IN 2017, THERE WERE 3.29 MILLION DEATHS DUE TO COPD WITH MORE THAN 80% OCCURRING IN LOW- AND MIDDLE-INCOME COUNTRIES (LMICS). PAKISTAN IS BURDENED WITH 4.9 MILLION COPD PATIENTS. THE AMERICAN LUNG ASSOCIATION RECOGNIZES THAT COPD IS TWICE AS COMMON IN RURAL SETTINGS. THIS IS DUE TO CHALLENGES THAT MAKE COPD DIAGNOSIS AND TREATMENT DIFFICULT. CONSIDERING THE SINGULARITIES OF PAKISTAN'S HEALTHCARE SYSTEM, THERE IS A SCARCITY OF DATA AVAILABLE ON THE PREVALENCE OF COPD AND ASTHMA IN THE RURAL SETTING.</p>	<p>A MAJORITY (56%) OF THE PARTICIPANTS WERE FEMALE AND THE MEAN AGE WAS 40 YEARS. 30% OF THE POPULATION USED AN OPEN FIRE TO COOK AND 12% OF THE POPULATION SMOKED. A TOTAL OF 882 SCREENINGS WERE PERFORMED, OF WHICH 826 WERE INTERPRETABLE. 80% OUT OF THE INTERPRETABLE SCREENING SHOWED OBSTRUCTIVE DISEASE, WHILE 9% SHOWED A POSSIBILITY OF A RESTRICTIVE DISEASE PATTERN, AND THE REST (20%) WERE NORMAL (Fig.1). IN THE OBSTRUCTIVE GROUP, COPD WAS DIAGNOSED IN 48% OF THE CASES, 41% SHOWED AN ASTHMATIC PICTURE AND ACO WAS OBSERVED IN 10% OF THE CASES (Fig.2). COPD AND ASTHMA WERE MOST COMMON IN THE 40-49 AGE RANGE GROUP.</p>	<p>SINCE THE COVID-19 PANDEMIC, LUNG DISEASES HAVE THREATENED THE RURAL UNDERSERVED POPULATION GREATLY. BY HIGHLIGHTING THE BURDEN OF COPD AND ASTHMA IN GHARO, DISTRICT THATA WE HOPE TO MAKE THE AUTHORITIES AWARE OF THE URGENT THREAT IT POSSES IN THE NONCOMMUNICABLE DISEASE CATEGORY, AS COPD LEADS TO AN INCREASED RISK OF HEART DISEASE AND LUNG CANCER. FURTHER SCREENING CAMPAIGNS NEED TO FOLLOW TO EFFECTIVELY DIAGNOSE NEW PATIENTS AND MANAGE THE CASES BEFORE IT IS TOO LATE. THE CHALLENGES THAT HINDER COPD MANAGEMENT IN RURAL AREAS NEED TO BE ADDRESSED AT A DISTRICT, STATE, AND NATIONAL LEVEL.</p>
METHOD	ACKNOWLEDGMENT	ACKNOWLEDGMENT
<p>RANDOM SCREENINGS WERE CONDUCTED FROM FEBRUARY 2022 TO FEBRUARY 2023 IN GHARO, DISTRICT THATA. A SURVEY WAS USED TO ASK THE COMMUNITY MEMBERS VISITING THE CLINICAL FACILITY ABOUT SYMPTOMS AND RISK FACTORS OF RESPIRATORY DISEASE. ONCE SUSPECTED CASES WERE IDENTIFIED, CONSENT WAS TAKEN AND INSTRUCTIONS REGARDING SPIROMETRY WERE GIVEN IN THE REGIONAL LANGUAGE. A SPIROMETRY TEST WITH A FLOW VOLUME LOOP WAS PERFORMED. IF THE INITIAL TEST SUGGESTED OBSTRUCTIVE LUNG DISEASE, BRANDED SALBUTAMOL WAS ADMINISTERED. THE PATIENT THEN UNDERWENT RE-TESTING AFTER 15 MINUTES. A BRONCHODILATOR(S) RESPONSE OF 10% WAS CONSIDERED SIGNIFICANT. PATIENTS WITH NORMAL SPIROMETRY PLUS SIGNIFICANT BD RESPONSE AND OBSTRUCTION, SHOWING COMPLETE REVERSIBILITY, WERE DIAGNOSED AS ASTHMATIC. THOSE SHOWING OBSTRUCTION AND SIGNIFICANT BD RESPONSE WERE CLASSIFIED AS ASTHMA-COPD OVERLAP (ACO) AND PATIENTS THAT DID NOT SHOW A BD RESPONSE WERE DIAGNOSED WITH COPD. ALL PATIENTS RECEIVED A PHYSICIAN CONSULTATION AND WERE COUNSELED ON SMOKING CESSATION AND PROPER VENTILATION IN CLOSED QUARTERS.</p>	<p>WE WOULD LIKE TO ACKNOWLEDGE THE STAFF OF SHINE HUMANITY (GHARO CLINIC BRANCH), PARTICULARLY, MR. IMAN FOR HER DEDICATED WORK AS THE SPIROMETRY TECHNICIAN. WE WOULD FURTHER LIKE TO EXTEND OUR GRATITUDE AND APPRECIATION TO MR. DAVID CHANAN FOR HIS CONTINUED SUPPORT FOR THE REQUIRE OF THE UNDERSERVED COMMUNITY IN GHARO.</p>	<p>WE WOULD LIKE TO ACKNOWLEDGE THE STAFF OF SHINE HUMANITY (GHARO CLINIC BRANCH), PARTICULARLY, MR. IMAN FOR HER DEDICATED WORK AS THE SPIROMETRY TECHNICIAN. WE WOULD FURTHER LIKE TO EXTEND OUR GRATITUDE AND APPRECIATION TO MR. DAVID CHANAN FOR HIS CONTINUED SUPPORT FOR THE REQUIRE OF THE UNDERSERVED COMMUNITY IN GHARO.</p>

Fig. 1 Screening Result Classification

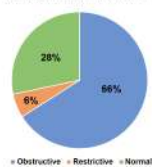


Fig. 2 Disease Classification in the Population (%)

