3. MATERIALS AND METHODS

3.1. Study Design

After obtaining the approval of the Ethics Committee, a cross-sectional observational study will be conducted in the Allergy Specialization Center (Al resafa, Baghdad, Iraq) with signs and symptoms suggestive of mite allergy to determine the allergen profile in Iraqi patients.

3.2. Collection of Samples

100 patients (age: 18-40 years) with mite allergic will be selected after careful screening, and the control group consists of 50 healthy participants taking into account the same age group. Patients will be examined and diagnosed at the clinic, information on age, gender, and allergen type and source will be recorded in the data form. The diagnosis of mite allergic will be based on the guidelines for (Mite allergic and their effects on asthma) and GINA (Global Asthma Initiative), respectively.

3.2.1. Selection of Patients

The experiments carried out in the application part of this study were carried out in the Allergy Expertise Center Laboratory in Baghdad, Iraq. Directed by the Internal Diseases and Ear Buran Throat Clinics to Allergy Specialist Center Allergy and Immunology Clinic; Patients with complaints of runny nose, nasal obstruction, sneezing, and sneezing were included in the study with their consent.

3.2.2. Questionnaire

Several criteria have been taken into consideration in forming the control and experimental groups.

The conditions observed in forming the experimental group are:

-Being over 18 years old.

-Not having a disease, such as upper or lower respiratory tract infection, that/ would affect the study results and method application in the last three months.

-Not being treated for any cancer, not being involved in treatment such as chemotherapy or radiotherapy.

-May have an impact on laboratory diagnosis results; Not being diagnosed with metabolic syndrome, Type - 1 and/or Type - 2 Diabetes.

There are no factors that negatively affect work such as obesity, smoking, drug abuse.-

-It is not possible to use any drugs, especially antihistamine drugs, that may affect the study.

The conditions observed in forming the control group are:

-Not having a disease, such as upper or lower respiratory tract infection, that would affect the study results and method application in the last three months

-Not being treated for any cancer, not being involved in treatment such as chemotherapy or radiotherapy.

-May have an impact on laboratory diagnosis results; Not being diagnosed with metabolic syndrome, Type - 1 and/or Type - 2 Diabetes.

-There are no factors that negatively affect work such as obesity, smoking, drug abuse.

-No use of antihistamines or any other drugs.

-Lack of diagnosis of mite allergic (This control and examination were performed by the specialist physician in the clinic and the health status of each participant was approved by the physician).

Verbal and written information about our study and experimental practices were given to 100 patients in the experimental group and 50 patients in the control group, questions of each patient and participant were answered, consent forms were signed and their consent

was obtained. However, approval was obtained from the Chief Physician Board and the Committee.

Each patient and participant constituting the experimental and control groups were interviewed under the supervision of a specialist physician and special information was obtained on some issues. In this context, information was received on the following points and the answers were noted:

-Whether there is a family history of allergies and allergic rhinitis.

-The nature of the allergic rhinitis complaint.

-Disease history, occurrence, frequency, and recurrence of the disease.

-The course of the disease, the factors that trigger the disease.

-Smoking, alcohol, and drug abuse.

-Pet feeding status.

-Questions about cleaning (personal and house cleaning).

3.2.3. Collection of Specimens

Under aseptic conditions, a total of 10 ml blood samples were taken from each patient and control into vacutainer tubes and were leaved for 30 minutes for spontaneous clotting at room temperature before being centrifuged at 2500 rpm for 5 minutes to separate serum. Serum samples were used for estimation of total IgE, specific IgE, IL-13, IL-9 and TNF-α.