

Specific immunotherapy among Italian specialists

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Key words: questionnaire; real life; specific immunotherapy.

After decades of debate on immunotherapy (IT), its efficacy, indications, contraindications and rules for prescription have been clearly defined and also sublingual immunotherapy (SLIT) has been accepted (1–3). The divulgation of guidelines have improved the practise of IT, but problems related to technical/human errors are still reported (4, 5) and there are few data on how IT is managed in routine practise. This Italian survey was aimed to assess the modalities of use of IT in clinical settings. A panel of experts, based on guidelines and literature analysis, prepared a questionnaire of 37 items. The questionnaire (Y/N or multiple-choice answers) was subdivided into four main sections (demography/general aspects, injection IT, SLIT, hymenoptera venom IT). Questionnaires were mailed to physicians, randomly selected from the registry of the Associazione Allergologi Immunologi Territoriali Ospedalieri (AAITO), and had to be returned anonymously.

Questionnaires were sent to 512 physicians, 341 (66.6%) were returned and 312 (60.9%) were analyzed (25 did not complete the form and four did not use IT). The population had a mean age of 43 years (range 33–68, 68% male) and 86% were allergists/pulmonologists.

Italian physicians are familiar with immunotherapy guidelines but safety aspects are still defective.

Seventy percent performed IT in a public structure and 30% in a private office. The percentage of paediatric patients (<14 years) treated with IT was about 30%.

IT was prescribed mainly for asthma (31%), moderate-severe rhinitis (35%), and rhinitis + asthma (34%). Symptom severity and drug consumption were the principal monitoring parameters, followed by spirometry and immunological assays. Only 58% of the respondents routinely gave to patients educational material on IT. The physician gave injections in 82% of cases and by the nursing staff under supervision in the remaining. A signed informed consent was required always by 68% of the physicians, only in selected cases by 14%, and never by 18%. Adequate emergency equipments/drugs, were available in <70% of cases (Fig. 1). The time of observation after injection was 20 min in 16% of the cases, 30 min in 48%, and 60 min in 36%.

All the physicians used also SLIT. The follow-up of SLIT patients was performed every 3 months by 30% of the physicians, every 4 months by 24%, every 6 months by 38%, mainly by clinical visit (52%), phone calls + visit

(35%) or phone call only (15%). At least one systemic reaction (asthma, urticaria/angioedema) was reported by 8% of the doctors, but only 4% switched to injections.

For venom immunotherapy, 58% of the physicians carried out also the diagnostic procedures before prescribing, whereas the remaining only gave the injections. The preferred extracts were: aqueous (57%), retard (39%), both (4%). Surprisingly, 53% of physicians routinely used rush, ultra-rush and cluster schedules. Immediate access to a resuscitation unit, or an on-call resuscitator, was available for 82% of physicians and at least one severe systemic reactions was reported by 33% of the respondents. Equipments/drugs for emergency were available on average in less than 60% of cases (Fig. 1). The observation period after injection was 30 min in 56% and 1 h in 44%.

The rationale of this survey was to assess the modality of prescription, the management and the knowledge of IT among Italian specialists. The most interesting aspects emerged from the survey were: (a) specialists are overall familiar with IT and most recommendations of the guidelines are observed; (b) the majority of physicians performed IT

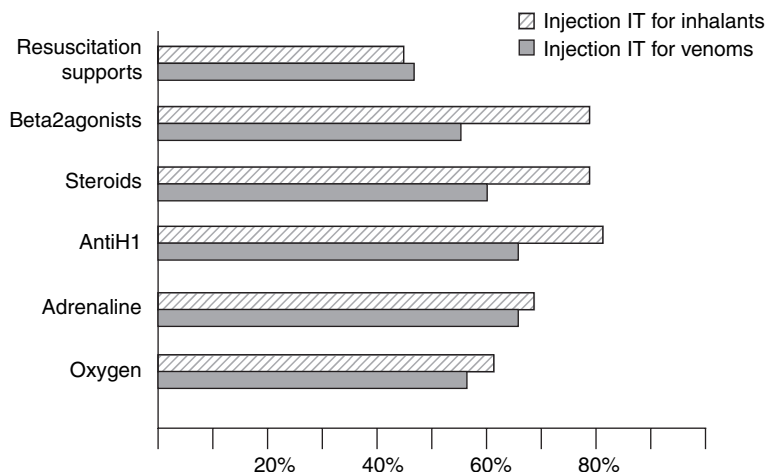


Figure 1. Percentages of physicians having available emergency tools (drugs and resuscitation supports) during injection immunotherapy for aeroallergens or for hymenoptera venoms.

in a hospital environment; (c) the availability of resuscitation facilities and/or drugs to treat severe reaction was not optimal; (d) an informed consent for injection IT was routinely required by < 70% of the physicians and (e) poor attention was paid to the education of the patients. In conclusion our survey evidenced a satisfactory overall knowledge of IT and some 'weak points'. These results would allow to take appropriate educational actions and this questionnaire could be used to monitor over time the possible effects of divulgation and educational initiatives.

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The effect of specific immunotherapy on exhaled breath condensate nitrite levels

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Key words: asthma; breath condensate; immunotherapy; nitrite.

Allergic asthma is a complex and heterogeneous disease that is characterized by intermittent reversible obstruction and chronic inflammation of the airways, bronchial hyperreactivity and an infiltration of lymphocytes and eosinophils in the airway submucosa (1).

Allergy is an important trigger in 60–90% of children and 50% of adults with asthma (2).

EBC nitrite levels increase after immunotherapy at the end of the first year follow-up.

The measurement of inflammatory markers in the exhaled air has gained increasing interest and importance in recent years as a simple and noninvasive assessment of airway inflammation in asthmatic children (3).

Specific immunotherapy (SIT) modifies the natural history of allergic airway disease. SIT is effective in asthma. It has been shown that allergen SIT can significantly reduce asthma symptoms and medication requirements (4).

Age-matched 14 nonatopic healthy children (control), 17 asthmatic children with SIT (Group I), and 12 asthmatic children without SIT (Group II) were included after informed consent was obtained.

Skin prick tests (ALK®, Hørsholm, Denmark) were only positive to *Dermatophagoides pteronyssinus* (Dpt) and *Dermatophagoides farinae* (Der f) allergens. Specific IgE tests (CAP Pharmacia, Uppsala, Sweden) were positive for Dpt and Der f.

Group I received SIT [50% Dpt, 50% Der f, ALK® mite mix (510), Denmark].

Breath condensate was collected according to the method reported by

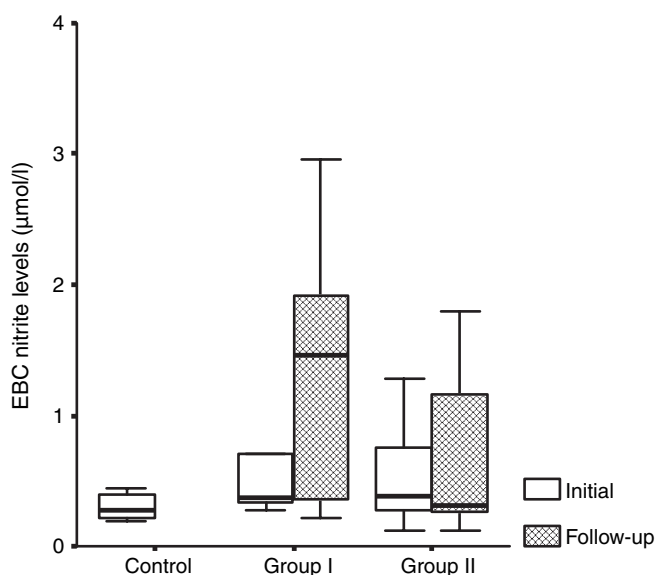


Figure 1. Initial and follow-up (at the end of 1 year) exhaled breath condensate (EBC) nitrite levels between the groups. EBC nitrite concentration was $0.29 \pm 0.08 \mu\text{mol/l}$ in the healthy children. EBC nitrite levels in group I at the beginning and at the end of 1 year follow-up were $0.77 \pm 0.74 \mu\text{mol/l}$ and $1.71 \pm 1.79 \mu\text{mol/l}$, respectively ($P = 0.04$). EBC nitrite levels in group II at the beginning and at the end of 1 year follow-up were $0.50 \pm 0.33 \mu\text{mol/l}$ and $1.11 \pm 1.93 \mu\text{mol/l}$, respectively ($P = 0.36$). There was no difference between the study groups at the beginning of the study. However, at the end of the 1 year follow-up the difference between the groups was statistically significant ($P = 0.05$).