Patient compliance with allergen immunotherapy

Background

The most recent studies reported a good compliance, estimated in 75% to 90%, to both SCIT and SLIT, inconvenience remaining the major cause of noncompliance, followed by cost of the treatment.


Compliance to SCIT

Reported rates of lack of compliance surprisingly high, corresponding to about 50%, in both adults (Cohn and Pizzi 1993) and children (Lower et al 1993). The protocol used, based on injections at weekly interval the first year and fortnightly interval the second year, was probably the causative factor for such a bad result. In particular, the study by Cohn and Pizzi (1993) analyzed practice records of 217 patients treated with SCIT for allergic rhinitis or allergic asthma and found that 50% of subjects with rhinitis and that 48% of those with rhinitis and asthma discontinued the treatment. Inconvenience was identified as the major cause of discontinuation (55% of cases) in rhinitis, while in rhinitis and asthma only 22% of patients indicated such an issue. The first cause of stopping SCIT in these patients (25%) was feeling better with drug treatment, which was not reported by any patient with only rhinitis.

In the same year, the study by Lower and colleagues (1993) reviewed 315 patients aged 5 to 18 years who were prescribed SCIT for allergic rhinitis or asthma. Of them, 44% were noncompliant, with males slightly more compliant than females, and private patients more compliant than nonprivate patients.

A study evaluated SCIT-treated subjects in a private practice in Atlanta, USA, and found a significantly higher compliance in patients receiving the injections in the allergist’s office compared to those receiving the injections in facilities outside the clinic, who had a noncompliance rate of about 35% (Tinkelman et al 1995).

A similar rate was detected in a population of 247 allergic patients undergoing SCIT in Mexico, who were noncompliant in 38% of cases. The major cause of noncompliance were the early feeling of improvement and the high cost of the treatment, but also the feeling of worsening with SCIT and the change to alternative medicine (Ruiz et al 1997).

Rhodes (1999) found that 12% of patients receiving optimal doses of allergen extracts discontinued SCIT before completion of the suggested three-year duration of treatment. The most common reasons for premature stopping were concurrent medical problems, inconvenience, and adverse reactions to treatment (Rhodes 1999).
A recent study analyzed the compliance to three forms of IT, SCIT, SLIT, and LNIT administered in hospital or in private office settings in 2774 children (Pajno et al. 2005). SCIT was used, by a build-up phase in 12 weeks followed by maintenance injections every 3–4 weeks, in 1886 subjects. Of them, 207 (10.9%) were noncompliant, with no significant difference between the two settings. Concerning the hospital setting, most patients withdrew from SCIT during the buildup phase or during the second year of treatment, while in private office setting most patients withdrew from SCIT after the first year of treatment. The major reason for withdrawing was the cost (35%), followed by family problems (21%), inconvenience (20%), lack of efficacy (16%), and adverse reactions (7%).

**Compliance to SLIT**

A withdrawal is frequently caused by repeated local reactions in the mouth or at gastrointestinal level (André et al. 2000; Wilson et al. 2005). Moreover, as previously noted in SCIT studies, it was observed that a lack of compliance to SLIT may be caused by the erroneous perception that once allergic symptoms are improved, SLIT is no more needed (Novembre et al. 2004).

In a study on 319 patients mainly addressing the efficacy of SLIT, the adherence to treatment (assessed by measuring the consumed allergen extracts) was estimated to be good, ie, >80% in 72% of patients, and fair, ie, >60% in 18% of patients (Marogna et al. 2004).

Also in recent studies the two major causes of noncompliance were inconvenience – in SCIT, it was the need to go to hospital or to the physician’s office to have the shots and in SLIT, it was the need of very frequent administrations – and cost. Concerning SLIT, which was introduced much more recently in respect to SCIT, it is likely that the individuation of optimal dosage and the modifications of current schedule may favor a further improvement of compliance and adherence. For example, it was recently demonstrated that in patients treated with SLIT for dust mite allergy, an intermittent schedule, while maintaining comparable efficacy and safety, had a better compliance than the usual continuous schedule (Cadario et al. 2008).

Adherence rates to prescribed inhaled drugs in asthma are surely problematic, corresponding to a range from 30% to 70% in general (Bender et al. 1997), with a rate lower than 50% in children (Milgrom et al. 1996). Cristoforo Incorvaia