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The new approach in immunotherapy for children**Giovanni Maria Traina**
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Background: Pediatric sublingual immunotherapy (SLIT) has made it possible to attract many children allergic to desensitization path to inhalants. SLIT determines many compliance problems and sometimes it is difficult to fulfill. The alternative of SLIT is subcutaneous immunotherapy (SCIT), which is commonly performed subcutaneously with needle. This technique has not undergone special changes over the years and it is not without risk or inconvenience. This led to the search for alternative means of administering the vaccine, in order to reduce the discomfort for the child, expanding compliance and increase safety for medical vaccinators and especially reducing the potential risk of adverse reaction.

Aim: Aim of this study is to evaluate new route of administration subcutaneous immunotherapy hyposensitizing with device without needle, pain perceived by the patient registration with respect to that traditionally administered by needle, of any adverse events in the course of that procedure and also evaluate difficulties perceived by vaccinating with such methodical.

Materials & Methods: Our team together with that of Allergology Hospital Bambino Gesù in Rome has completed a first study, aimed precisely to assess the pain perceived by the patient and safety for the patient and for the operator, with interesting results. For this purpose, 36 patients were recruited and evaluated with oculorhinitis and/or bronchial asthma grass, aged between 5 and 18 years, which were administered under the skin of the arms, polymerized with glutaraldehyde extracted by grasses, with device without needle and with traditional SCIT with needle. They were recorded with dedicated VAS scale, the perceived pain, any adverse reactions and difficulty of the procedure by the vaccinator.

Results: All patients completed the study which provided 432 doses of AIT SCIT grasses, of which 216 with device without the needle. The perceived pain was significantly lower than that of immunotherapy administered by needle. In none of them, are adverse events of any grade occurred. It has highlighted the need for adequate training of the performer to better use the device without the needle. Changes made to the device have however solved these problems completely.

Conclusions: Vaccination with needleless device has several advantages and guarantees, compared to conventional administration SCIT, best welcome especially by children. This is important, to be able to start early immunotherapy, as recommended by the most recent studies, in order to prematurely change the natural evolution of allergic inflammation. The new technique provides a much higher safety for both the vaccinator that for the vaccinated, with a better acceptance by the patient of the procedure and thus a better and wider adherence to immunization programs. Just for the inoculation technique, such practice may allow a better distribution of the subcutaneous vaccine, with a broader recruitment of Langerhans cells by the antigen and thus a better immunological response.

Biography

Giovanni Maria Traina completed his Graduation in medicine and surgery at university of Messina. He is Specialist in Pediatrics and Allergology Pediatrics at University of Milan, Perugia and Pavia. He is an author of over 25 scientific publications, speaker at over 50 national and international conferences.

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