The Patch Test Software for "ESSCA"[1]

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Both multicentre co-operation and electronic data processing have well-known advantages. Put together in the field of clinical contact dermatitis research, they offer unique means of surveillance and analysis of contact allergy [1]. Encouraged by this perspective, a network of patch test clinics was conceived on a European scale, termed "European Surveillance System on Contact Allergies (ESSCA)", formally founded during the ESCD congress on Oct., 10th, 1996 in London as a working party of the ESCD. Since then, a common standard of data to be recorded has been developed ("minimal dataset") and, in a next step, a computer program to record and analyse data, which shall be presented here.

Methods

1. Standardised Questionnaire

The "minimal dataset" contains items considered essential, as well as other items regarded as optional, which are marked as such (see Fig. 1 and handouts). In addition to standardised categorical items, such as sites, diagnoses, occupations (coded into ISCO-88 [2] compatible numbers from the job titles given), free text can be entered both on the paper form – required only in case of offline recording – and into the computer, to achieve a highly individualised documentation. The questionnaire is available for all ESSCA partners in electronic format, to be adapted to local needs, including translation, while preserving the set of essential items.

2. Computer Program

Several computer programs are already in use, e.g., by ESSCA members. Due to the fact that a multilingual version for ESSCA could to a large extent be a spin-off product of the new Windows™-based software being prepared for the IVDK, this respective option was followed; a call for proposals did not reveal alternatives of similar cost-effectiveness. As a starting point for this development the relational data structure of the "ALLDAT/IVDK" program [3], used since 1989 by in the meantime more than 30 German centres, was used (fig. 1).

The present program is a 32-bit Windows based database application, programmed in MS C++, Visual Basic™ 6, MS-Access™-VBA and MS-Access™-SQL. The software uses platform independent ODBC connectivity technology for database access. The standard database format is MS-Access™-97 format (MS-Office™ 97, Microsoft Jet-Engine 3.x). Hard- and software requirements are shown in tab. 1.

Tab. 1: Hard- and Software requirements of WinAlldat/ESSCA

processor	Intel-based Standard-PC (Pentium-I/II/III processor family incl. Celeron, alternatively compatible vendors like AMD K6/2 or AMD-Athlon
CPU speed	200 MHz or higher
main memory	at least 32 MB, but 64 MB RAM or more recommended
Operating system	Microsoft 32-bit operating systems (e.g., Windows 95/98, Windows-NT 4.0, Windows-2000), including network support
Additional software	For reports, statistics and self-created forms MS-Access 97 and MS-Winword (better: MS-Office 97) strongly recommended

The graphic user interface follows the standard layout of Windows based software applications, with one main screen, including push buttons for the different sequential tasks encountered during the work-up of a patch test patient, like

- searching the database for an existing patient record, or entering or updating personal patient data as well as the current history (items: see Fig. 1 and handout),
- creating patient specific test series with products brought in by the patient (with concentration and test vehicle)
- recording the readings with these series and other series (e.g., standard and exposure / occupation specific series)
- entering a statement on the relevance of each positive reaction and final diagnoses (see Fig. 1 and handout)

Administrative Routines include the creation of test series used for more than one patient, i.e., the standard and other series, setting of preferences for screen appearance and printouts, various printouts, including a test protocol with all results, report functions for basic analyses of data, and an export function for further processing of – anonymised – data, including data transferred for pooled analysis in the "data centre(s)". Online help is available for any part of the menu.

It should be mentioned that any other, existing program could be used instead of WinAlldat/ESSCA, as long as a suitably formatted output, following the definitions of an "export interface", is provided.

Results

During the beta test phase, successive program versions were improved by user feedback, so that by May, 2000, the final version was available for local installation for all ESSCA partners. This means that results in terms of a considerable amount of patient data which could be analysed will be available *after* the ESCD congress.

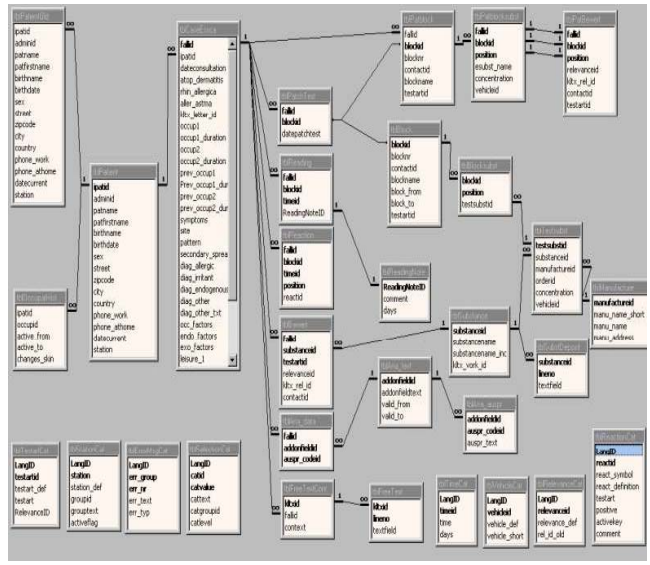
Perspectives

Once WinAlldat/ESSCA has been established and – if necessary – further amended responding to user feedback, a second program option will be developed, namely, a Java™-based application with multi-platform abilities, which is expected to prove even more useful for those users (ESSCA members) who work in a complex heterogeneous network environment, e.g., within a hospital information system.

Management of pooled data will follow guidelines developed and accepted by ESSCA, including issues like access to and maintenance of data (other than own data) and participation in analysis and publication. The aims of ESSCA include:

- Surveillance of contact allergies for early recognition of emerging allergens and specific exposures contributing to sensitisation
- Comparative analyses concerning different countries and regions (different markets)
- Standardisation and quality control of patch testing on a European level
- Support of national and European institutions involved in public health
- Support of manufacturers of consumer and industrial products in post marketing surveillance of product safety, specifically for industries acting internationally.

Figure 1: Relational Database Structure of WinAlldat/ESSCA



References

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