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Treatment for hyperactive children: Homeopathy and methylphenidate compared in a family setting

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Abstract

Background: The sharp increase of the prescription of methylphenidate (MPD) in hyperactive children in recent years is a matter of increasing uneasiness among professionals, parents and politicians. There is little awareness of treatment alternatives. The purpose of this prospective trial was to assess the efficacy of homeopathy in hyperactive patients, and to compare it MPD. The study was performed in a paediatric practice with conventional and homeopathic background.

Methods: Children aged 3 to 17 years, conforming to the DSM-IV criteria for attention deficit/hyperactivity disorder (ADHD) with a Conners Global Index (CGI) of 14 or higher were eligible for the study. All of them received an individual homeopathic treatment. When clinical improvement reached 50 %, the parents were asked to reevaluate the symptoms. Those who did not improve sufficiently on homeopathy were changed to MPD, and again evaluated after three months.

Findings: 115 children (92 boys, 23 girls) with a mean age of 8.3 years at diagnosis were included in the study. Prior to treatment the mean CGI was 20.63 (14-30), the mean index of the homeopathy group 20.52 and of the MPD-group 20.94. After an average treatment time of 3,5 months 86 children (75 %) had responded to homeopathy, reaching a clinical improvement-rating of 73 % and an amelioration of the CGI of 55 %. 25 children (22 %) needed MPD; the average duration of homeopathic (pre-) treatment in this group was 22 months. Clinical improvement under MPD reached 65 %, the lowering of the CGI 48 %. Three children did not respond to homeopathy nor to MPD, and one left the study.

Interpretation: In cases where treatment of a hyperactive child is not urgent, homeopathy is a valuable alternative to MPD. The reported results of homeopathic

treatment appear to be similar to the effects of MPD. Only children who did not reach the high level of sensory integration for school had to be changed to MPD. In preschoolers, homeopathy appears a particularly useful treatment for ADHD.

Keywords: Hyperactive children, ADHD, homeopathy, methylphendidate**.**

Introduction

The trends in the prevalence of attention deficit/hyperactivity disorder (ADHD) and the prescription of methylphendidate (MPD) in children and adolescents in north America have shown a marked increase during the past decade[1,2]. Reported prescription rates range from 1.1 % in Michigan (children 0-19 years)[3] , 3.4 % in Ontario (students grades 7, 9, 11, 13)[4] to 8-10 % in south-eastern Virginia (students grades 2-5, with a maximum of 18 to 20 % of grade 5 white boys)[5]. The increase seems not to be limited to the United States and Canada: In Switzerland, as in many other western countries, the frequency of the diagnosis of ADHD and prescription of MPD have also risen remarkably during the past years[6,7].

Along with this rise comes a concern for more accurate diagnosis of ADHD[8], and reports of abuse of MPD which has similarities with cocaine in terms of pharmacodynamics and pharmacokinetics[9-12]. Other problems include non-compliance with frequent dosing and wear-off or rebound effects[13].

For parents of hyperactive children the fact that their child is receiving long-term treatment with a substance that falls under the legislation for narcotics (in Switzerland) is often a cause of major concern. Many of them refuse such a treatment unless the schools exert extreme pressure. One of the main social causes for the rise in the prescription of MPD may be found in the lowering of public education budgets in recent years, leading to larger school classes in which hyperactive behaviour is less tolerable.

It is not surprising therefore, that professionals seek options in pharmacotherapy and parents look for alternative treatments, despite the lack of controlled research on their efficacy and safety[13,14,15] .

The purpose of this trial was to assess the efficacy of homeopathic treatment[16-18] in ADHD, answering the following questions:

- What percentage of children can be sufficiently treated with homeopathy and needs no other medication? How many need MPD? And how many do not respond to these treatments at all?
- What is the effect of homeopathic treatment and MPD as rated by the CGI[19-21]?
- How do parents rate clinical improvement, including feedback from school?
- Time horizons: How long is needed to reach an adequate treatment effect in homeopathy? What was the duration of homeopathic treatment in patients who finally received MPD?

Methods

Children between 3 and 17 years conforming to the DSM-IV diagnostic criteria for ADHD were eligible for the study.[22,] The diagnostic procedures included meticulous history taking, a general and neurologic examination (as described by the author earlier[23]) and an assessment of the hyperactivity and attention deficit symptoms according to the Conners 10 item rating scale (Conners Global Index[19]). Patients with a CGI of 14 or higher were included in the study. If there was any doubt concerning the diagnosis of ADHD, patients were referred to a child and adolescent psychiatrist or psychologist or a paediatric neurologist for further testing (36 children, 31 % of all patients).

Each child was first treated with homeopathy. To be effective, the homeopathic medicament has to match the *individual* symptoms of the patient, i.e. the symptoms that are *not* commonly present in most hyperactive children and therefore distinguish him from the others. This process of individual adaptation of the treatment may require some time, and include trials of possible medicaments, until the optimal effect is reached.

[,] *DSM-IV diagnostic criteria for ADHD*: 1. Presence of either six symptoms of inattention or six symptoms of hyperactivity-impulsivity, which have persisted for at least 6 months to a degree that is maladaptive and inconsistent with development level. 2. Presence of some symptoms that caused impairment before age 7 years. 3. Presence of some impairment from symptoms in two or more settings (e.g. school or work and at home). 4. Clear evidence of clinically significant impairment in social, academic, or occupational functioning. 5. The symptoms do not occur exclusively during the course of a pervasive developmental disorder, schizophrenia, or other psychotic disorder and are not better accounted for by another mental disorder (e.g. mood disorder, anxiety disorder, dissociative disorder, or a personality disorder.

The matching of patient-symptoms and homeopathic remedies was performed following the procedures of Hahnemann[16-18], assisted by a computer-program (Amokoor[24]) based on the works of Boenninghausen[25-27]. The prescribing technique has been described by the author in earlier publications[28,29]. In this trial homeopathic preparations of the following medicaments were used successfully (number of patients in parenthesis): *Lyc*. (12), *calc*. (7), *sulph*. (7), *bell.* (6), *caust*. (6), *phos*. (6), *ign*. (5), *nux-v*. (5), *arg-n*. (4), *sep*. (4), *lach*. (3), *merc.* (3), *puls*. (3), *sil.* (3), *ars*. (2), *staph.* (2), *agar.* (1), *bar-c.* (1), *bry.* (1), *chin.* (1), *hep.* (1), *hyos*. (1), *nat-m*. (1) and *stram.* (1)[30]. All patients received liquid LM-potencies[18] (LM-3 to LM-30) every day or every second day, depending on the severity of their symptoms. Each potency (e.g. LM-3) was used for 4 weeks, moving on to the next higher level (e.g. LM-4) after a treatment-free interval of several days to one week. If the child's reaction to the medication was insufficient (wrong choices usually do not change the hyperactivity symptoms), the next most similar remedy was prescribed. Once an adequate response had been reached, the children received the next higher potency of the same medicine.

For clinical assessment of treatment the parents had to report the changes observed in every symptom they initially reported, i.e. hyperactivity 'considerably improved', slightly improved, 'unchanged' or 'worse'. After reporting the changes of every individual symptom they were asked to summarize the overall clinical improvement in percent. When the overall amelioration reached 50 % or more, the treatment was reassessed by the CGI rating scale. The timing of this reassessment thus was individual, depending on the time required to find the correct homeopathic medicine. Patients who did not reach sufficient clinical improvement, or whose behaviour remained unacceptable despite a certain response to homeopathy were changed to MPD after reevaluation. The point at which a patient was deemed a treatment failure thus was individual, dependent on environmental tolerance for his behaviour. Many children had a long term homeopathic treatment, before a crisis (usually school pressure) made MPD necessary. Two weeks after the initiation of MPD-treatment, the CGI was determined to distinguish responders from non-responders. The final evaluation of this treatment by CGI followed three months after the optimal adjustment of MPD-dosage.

Patients

115 children (92 boys, 23 girls) conformed to the eligibility criteria. Their mean age at diagnosis was 8.3 years. In the homeopathy group 76 % of the patients were boys, 24 % girls, with a mean age of 7.9 years at diagnosis. In the MPD group 92 % were boys, 8 % girls, with a mean age of 9.6 years. Non responders and drop outs were all boys with a mean age of 9.0 years.

Results

Treatment modalities in ADHD patients

86 patients (75 %) responded sufficiently to homeopathy, and 25 (22 %) needed MPD. Only three patients (3%) did not respond neither to homeopathy nor to MPD (*Table 1*). One child left the study.

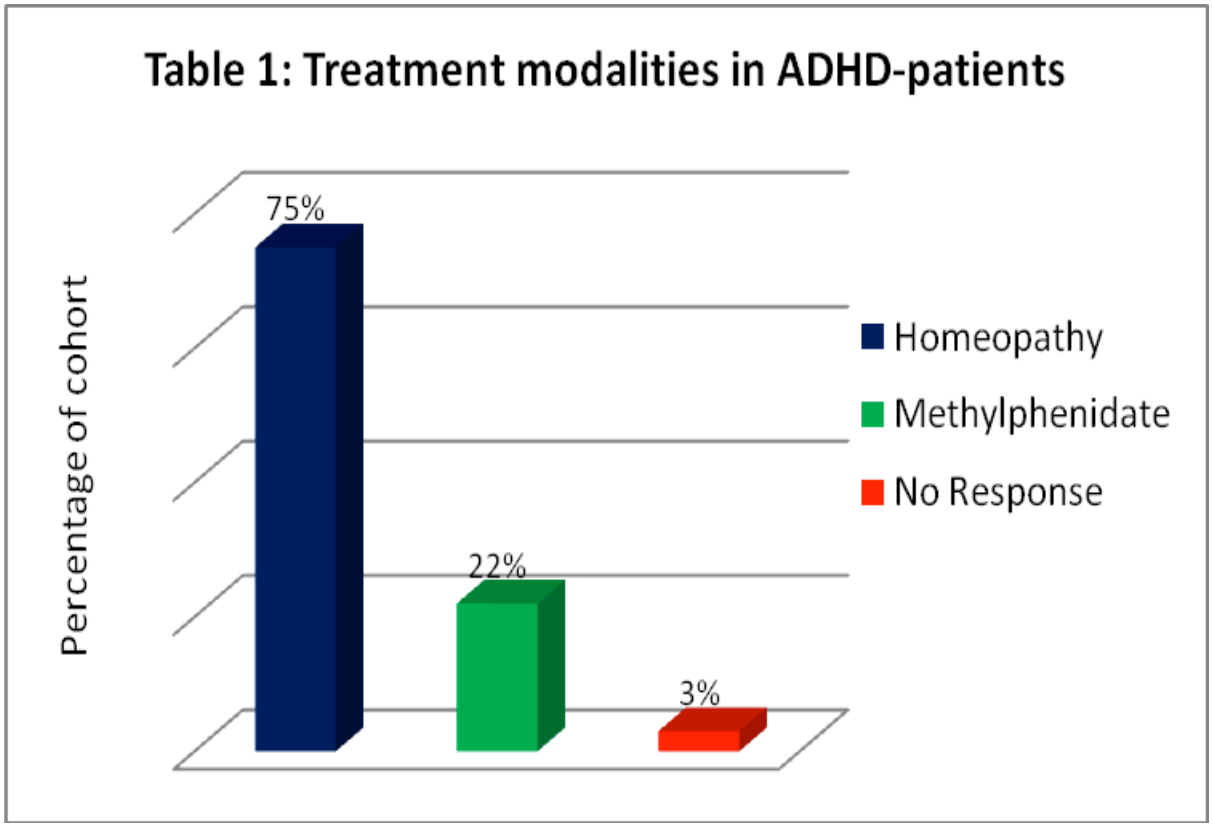

Table 1: 75% of the cohort react well to homeopathy, 22% need methylphenidate and 3% react to neither treatment.

Comparison of response to homeopathy and MPD

The mean value of the CGI ratings of all patients prior to treatment was 20.63, the homeopathy group 20.52, and the MPD group 20.94. During homeopathic treatment the mean CGI rating fell to 9.27 corresponding to an amelioration of 55 %, and with MPD to 10.96, corresponding to an amelioration of 48 % *(Table 2*). The CGI prior to change to MPD was determined only in a small group of patients. It reached an average value of 13.0 which corresponds to an amelioration of 38 %.

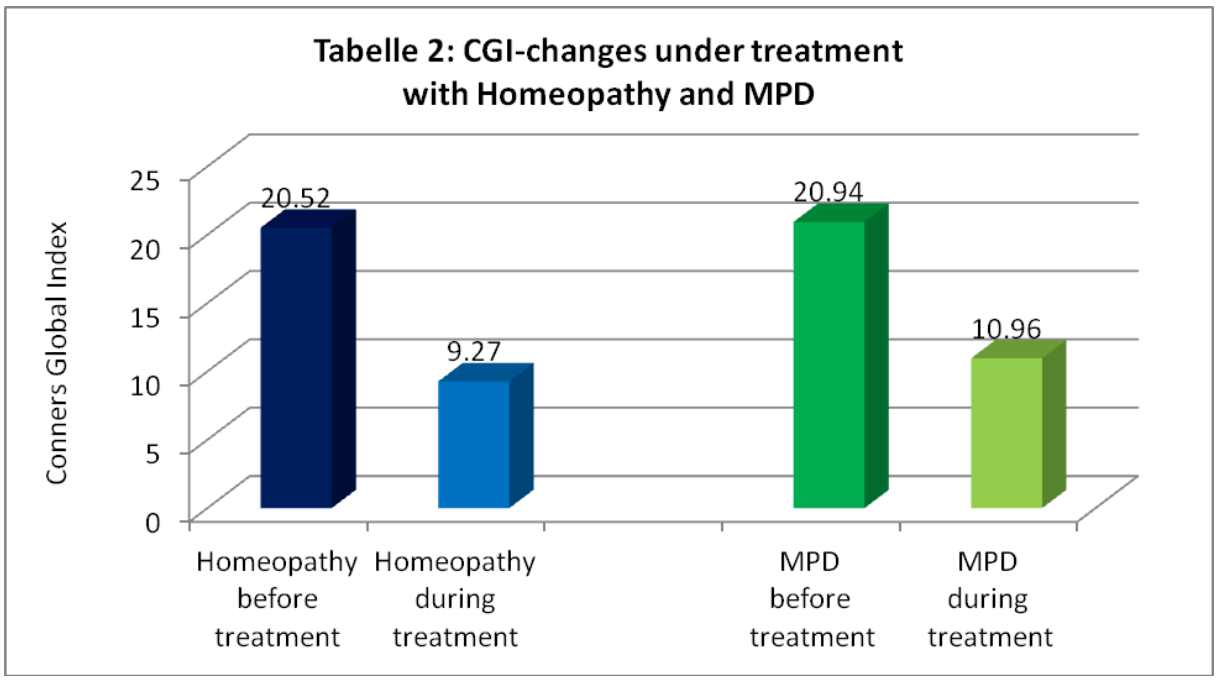

Table 2: CGI-Improvement under homeopathy is 55%, under MPD 48%

Clinical improvement ratings

Global clinical improvement ratings by parents independent from the CGI-ratings were in *homeopathy* treated children 73%, and in *MPD* treated children 65% (Table 3). Most of the patients who had eventually received MPD had a treatment effect from homeopathy, but the mean global clinical improvement was with 43% considerably lower than in the children who stayed on homeopathy.

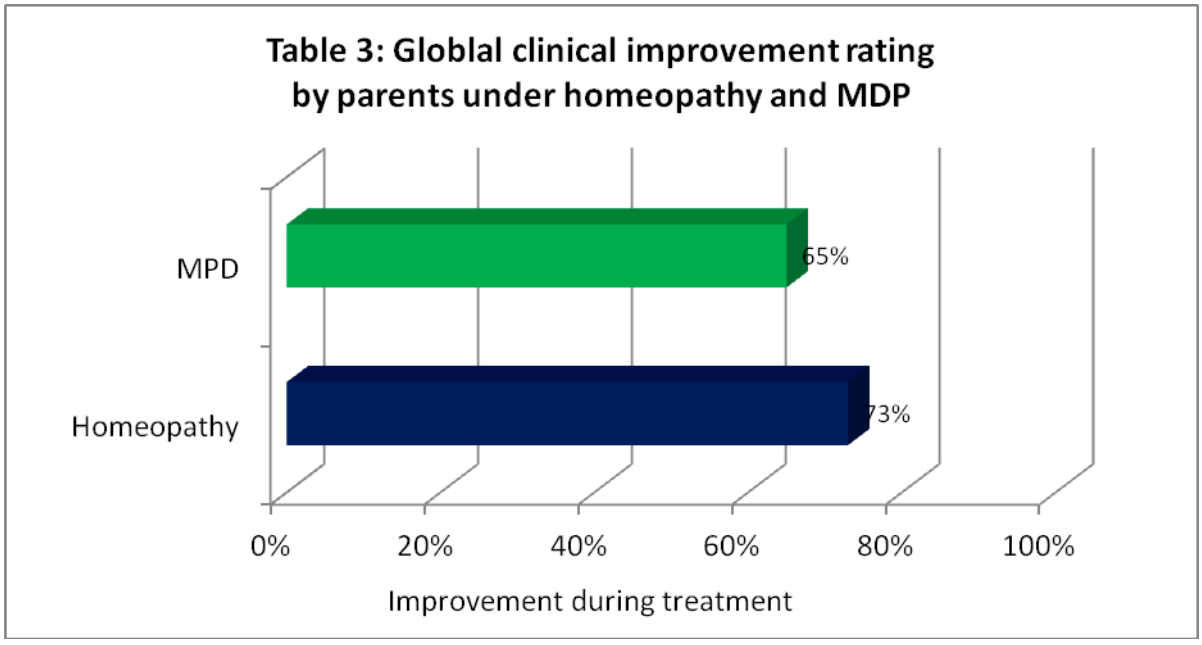

Table 3: Parental impression of better improvement under homeopathy than under MPD

Time horizons

The average time needed to reach an optimal homeopathic treatment effect was 3,5 months (1-16 months, *table 4*), the mean duration of homeopathic treatment in those patients who finally needed MPD 22 months (4-62 months, *table 5*).

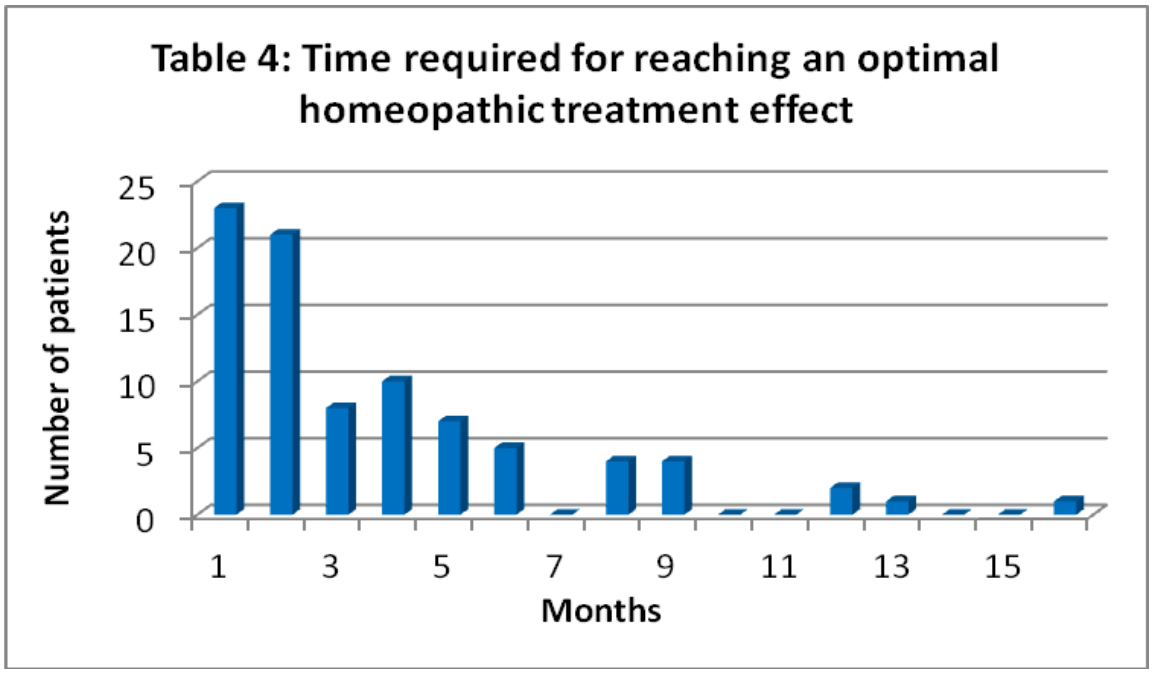

Table 4: Homeopathy often needs time to reach a stable improvement

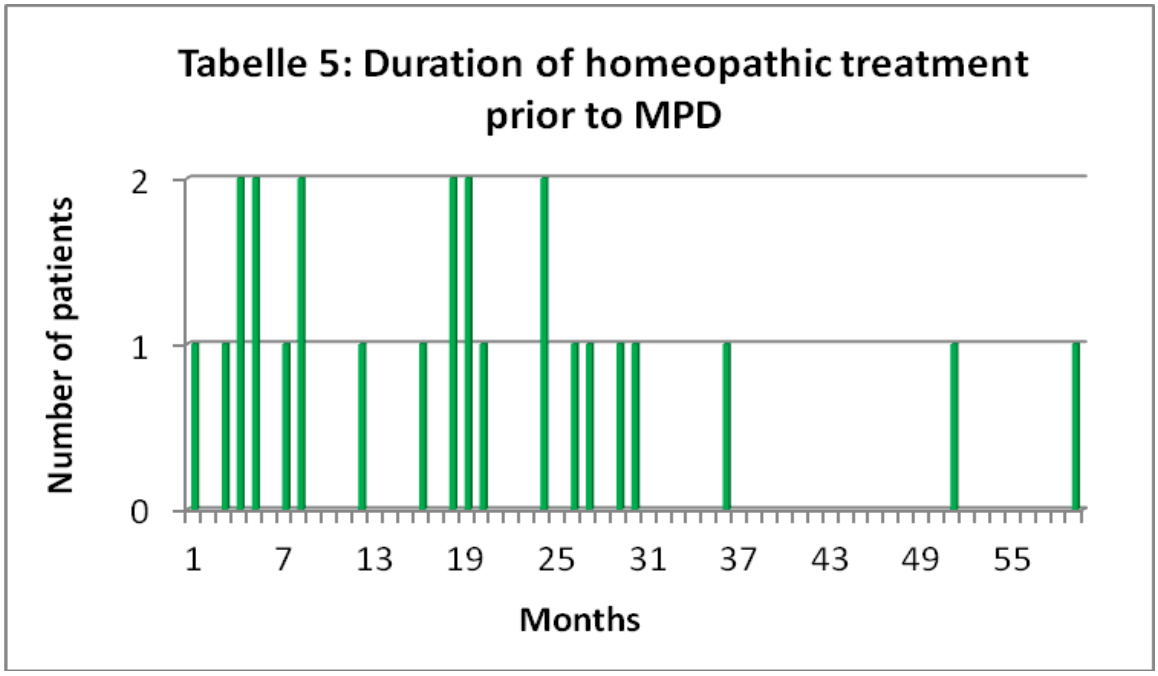

Table 5: Many patients who finally received MPD had a prolonged homeopathic treatment before the change.

Discussion

In an earlier placebo-controlled study Lamont showed that homeopathy is an effective treatment in hyperactive children[31]. Instead of long discussions whether or not homeopathy is placebo, the effects of this method should be assessed by the same scales that are applied in mainstream-medicine. In a situation where alternative treatments are frequently used, it is essential to know what can be expected of them. It is surprising that 75% of the studied children reach a satisfactory amelioration with homeopathy in a *family* setting. Conversely most children who needed MPD, did so because of *school* pressure and not the situation at home.

The observed parent ratings of clinical improvement and the lowering of the CGI under homeopathy were slightly better than under MPD. This finding may be due to the short duration of action of MPD (four hours in the normal- and 8 hours in retard-form[32]), which often leads to difficult times at noon and in the evening (observation of the authors). Therefore it is mainly the school-situation that profits from MPD. The difference between clinical amelioration and CGI ratings can be explained by the fact, that every amelioration in a hyperactive child is an enormous relief for family and school. The higher clinical improvement ratings reflect this relief, while the detailed 10

item ratings with the CGI show a more realistic picture of what has really been achieved.

It may be argued that all children who received MPD also had a homeopathic pre-treatment, and that they may therefore react better to MPD than children without pre-treatment. The authors do not think that this is the case, because in the treatment-free intervals between the homeopathic medicines, most children show a reappearance of the hyperactivity symptoms. This finding favours the impression, that homeopathy is, like MPD, a palliative treatment. Long term follow-up studies over several years would be necessary to settle the question as to, whether or not a curative effect can be expected.

A problem in homeopathy is the delay until the optimal amelioration is reached. Since it is necessary to make an individualized prescription, it is difficult to treat in a situation where an improvement has to be immediate. The choice of the correct medication is dependent on the individuality of the symptoms, if a patient only has the 'standard symptoms' of ADHD and nothing peculiar, the homeopathic physician may have to make 'therapeutic trials' to find the correct medicine. The administration of a wrong remedy usually does not change anything, while giving the right one leads to a clear, substantial improvement within four weeks. Table 4 shows, that the majority of children responding to homeopathy do so within 6 months. If a child has not responded by then, it is unlikely that it will, and MPD treatment may be considered at this time.

Major advantages of homeopathy over MPD are the easy administration (once every day or once every second day), a continuous treatment effect over 24 hours, no side effects except for a possible short initial aggravation, and no abuse potential. For many parents this last point is *the* most important concern. At preschool-age, when MPD has many side effects [33], homeopathy may be the first choice, as well as for students, who do not need to have an immediate relief. Finally, there is an extremely low number of non-responders if both methods are available (3%).

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