of ADHD, including societal costs of ADHD and the rationale for and the essential facets of parent training, school intervention, and child-directed psychosocial treatment for ADHD, as well as the role of medication in treatment. Examples of studies showing the benefit of multimodal treatment for ADHD were described. I congratulated the medical school on having been a major collaborating partner in conducting the STP in Kurume in August, 2005. The talk concluded with recommendations for clinical practice in primary care and mental health, and a public health perspective on treatment of ADHD. I praised the individuals present who have been involved in the development of an excellent community system of care for ADHD in Kurume, spearheaded and led by Dr. Yamashita of the Pediatric Neurology group at Kurume University School of Medicine.

Attendees: Approximately 41 residents, faculty, and students

8:30 Dinner with Pediatric Neurology Group (Drs. Matsuishi, Yamashita, Ohya, Iizuka, and Ohshige)

November 29, 2005:

9 AM til 12:00 Meeting with Special Education Teachers and Staff of Kurume City Schools

Practical Management of ADHD in the Classroom: Role of Special Educators in Treatment of ADHD in Children

(120 min presentation--translated and handouts in Japanese)

Lecture Summary: I reviewed the definition of ADHD and the key aspects of diagnosis and assessment, with an emphasis on assessing impairment and functioning in classroom settings and the long-term outcomes of ADHD children in schools. I described key components of an evidence-based approach to treatment of ADHD, focusing on the importance of intervening in the school and child-directed psychosocial treatment, as well as the role of medication as an adjunct in treatment. Handouts in Japanese described procedures that teachers could use to treat ADHD children in schools, including general advice on classroom structure and teaching (e.g., Tips for working with disruptive children), as well as specific programs (e.g., time out, point systems). How to establish a home-school Daily Report Card was discussed in detail, and school-wide interventions were reviewed. Dr. Yamashita described in detail the summer treatment program that was conducted in cooperation with the Kurume City Schools in August of 2005. Finally, examples of studies showing the benefit of multimodal treatment for ADHD in school settings were described. I concluded with recommendations for management of ADHD in schools, home, and primary care.

Attendees: Approximately 50 school personnel

Afternoon: Preparing evening lecture and travel to Fukuoka

19:00 Evening Lecture, Fukuoka

Comprehensive Treatment for ADHD in Children

(90 min presentation with 30 min question and answer—simultaneous translation and handouts in Japanese)

Lecture Summary (Powerpoint attached): I reviewed the definition of ADHD and the key aspects of diagnosis and assessment, with an emphasis on assessing impairment. I described key components of an evidence-based approach to treatment of ADHD, including the rationale for and the essential facets of parent training, school intervention, and child-directed psychosocial treatment for ADHD, as well as the role of medication in treatment. The societal costs of ADHD were described, and the cost to families in stress and disruption were discussed. Examples of studies showing the benefit of multimodal treatment for ADHD were described. I concluded with recommendations for clinical practice in primary care and mental health and recommendations for parents and teachers. I emphasized the importance of a public health perspective to treating ADHD and encouraged those present from Fukuoka to emulate Kurume, which has established primary-care/university/school system/mental health collaboration in treatment of ADHD.

Attendees: Approximately 150 parents, health/mental health professionals, and educators

November 30, 2005:

Day-long Meeting with STP staff members

Discussion of Kurume 2005 STP and Future Plans

(Entire Day and Evening—10:00 AM through 20:30 PM, including working lunch and dinner)

Summary: The day was spent reviewing the STP conducted last summer, including procedures, data evaluation, and impact. Implementation problems and successes were discussed, and solutions for problems were devised. The outcome data were distributed and discussed. Revisions to measurements for next summer were discussed. Much discussion was devoted to the length and timing of the program and to training staff for summer, 2006. In the evening, the group was joined by a number of the students who had served as counselors. In addition to reviewing STP questions, I did a presentation on ADHD and its treatment, with a focus on the COPE program for parent training. I reviewed the format and schedule of sessions, showed the videotape of parent-child vignettes and modeled a session, showed the manual, and discussed different ways of integration parent training with the STP. This program will be translated and used in the 2006 summer program. Hopefully the translated manual will be able to be widely used in Japan even in settings in which an STP is not conducted.

Attendees: Approximately12 (day) and 25 (evening—students and teachers added)

December 1, 2005:

Morning: Free

Afternoon Visit to Special Education Class at Nannun Elementary School.

(13:30 to 15:30--2 hours)

Visit summary: We spent two hours observing the afternoon special education classroom being taught by Ms. Kumon and Ms. Fujino, who was a teacher in the STP and was present in the previous Tuesday's workshop. She was conducting a social skills training exercise with 7 special education students utilizing procedures that she had learned from the STP and adapted to her classroom setting. The first part of the lesson involved learning a clue about an emotion and passing that information nonverbally down a chain of children. Two chains of children competed to see if the last child in the chain accurately retained the initial clue. The second part of the lesson was a cooperative bowling game, again with two teams. Children focused on praising each other when successful, consoling each other if distressed, and their game skills. After the lesson, children were dismissed, and the adults met to discuss the activity. I was very impressed with Ms. Kumon and her lesson. The children were perfectly behaved and exhibited excellent social skills. Ms. Kumon had done an excellent job of adapting STP procedures for her classroom. Several of the children in her class had been in the STP, and they clearly retained what they had learned. It was very useful to see how a special education classroom in Japan is conducted.

Attendees: Drs. Yamashita, Pelham, Ohya, 2 teachers, 3 classroom aides, and 7 students

Dinner with Dr. Yamashita discussing the STP plans for 2006

18:15-20:15 Evening Lecture, Department of Psychology, Kurume University

Role of Psychologists in Treatment of ADHD in the USA

(90 mins plus Dr. Yamashita's talk plus 30 mins question and answer--Translated)

Lecture Summary: I reviewed the definition of ADHD and the key aspects of diagnosis and assessment of symptoms and impairment. Societal costs of ADHD and the public health importance of effective treatment were discussed. I described key components of an evidence-based approach to treatment of ADHD, including the rationale for and the essential facets of parent training, school intervention, and child-directed psychosocial treatment for ADHD, as well as the role of medication in treatment. The importance of psychologists in each of these components—particularly parent training and child treatment—were discussed. The problem of widespread use of nonevidence-based psychosocial treatments was discussed. Examples of studies showing the benefit of multimodal treatments for ADHD implemented by psychologists were described. I concluded with recommendations for clinical practice in primary care and mental health and recommendations for parents and teachers, with an emphasis on what psychologists can do. I encouraged the students to sign up as counselors in the 2006 STP that will again involve Kurume University and encouraged any student who was bilingual to sign up as a counselor at one of the STPs in the USA.

Attendees: Approximately 150 students

December 2, 2005:

Early Morning-midmorning Travel from Kurume to Hiroshima

11 AM til 14:30 PM Morning/afternoon Visit to Hiroshima Juvenile Training School

Summary: We met the Mr. Mukai, Program Director of the training school, and Ms. Shinagawa, a free-lance writer, for a tour of the Hiroshima Juvenile Training School. Mr. Mukai met with us and escorted us on a tour, on which we saw living quarters, activities, and had the treatment program explained. The school was very impressive—more so than most of the comparable programs that I have seen in the USA. The treatment regimen bears many similarities to the excellent point/token/level systems that are used in the evidence-based residential programs in the U.S.A., including the Achievement Place model, the Boy's Town model, and the STP. As in the STP, the treatment program is integrated in group-based recreational activities (e.g., running, traditional martial arts) and other group projects. The program is designed to foster understanding of allegiance to a social group. We observed several activities and participated in one (based on small groups) designed to teach group trust. All in all, the program was very impressive upon observation. After the tour, we had lunch with Mr. Mukai and the Director, Mr. Komatsu. Following lunch, Mr. Mukai made a Powerpoint presentation in which he outlined the evidence base that he used to design the treatment regimen and the outcomes that it has produced. It is clear that he has a very sophisticated grasp of the worldwide literature on the risk factors and mechanisms of aggression and delinquency, and that he has designed a state-of-the-art treatment program. He presented outcomes for the training program that were very impressive indeed. (Translation)

Comprehensive, Evidence-based Treatment for ADHD

(45 min—joint presentation with Dr. Yamashita—Translation)

Lecture summary: In this lecture, I focused first on the teen and young-adult outcomes of ADHD individuals—primarily delinquency, poor educational outcomes, and substance abuse. I subsequently described evidence-based treatment of ADHD. Dr. Yamashita then described the STP approach. Finally, I summarized the treatment literature on other evidence-based approaches to treatment, including for delinquency, aggression, and other disorders, as well as the various sources in the U.S.A. for identification of evidence-based practices (e.g., the SAMSHA NREPP list, Blue Ribbon Practice list).

Attendees: Approximately 30 staff members

15:00-17:00 Travel from Hiroshima to Kobe

18:30 PM Lecture, Kobe University School of Medicine

The STP – A Model Program for Treating ADHD: Interface Between Research and Practice

(120 Minutes plus 30 min question and answers—simultaneous translation and handouts in

Japanese)

Lecture Summary: This lecture began with an introduction to ADHD, including contemporary diagnostic practices, with an emphasis on assessing functional impairments, societal costs of ADHD, the rationale for treatment, and an overview of the components of comprehensive treatment (parent training, school intervention, child intervention, and medication if needed). The rest of the lecture focused on a detailed description of the STP and studies that have been conducted in the STP setting that have shed light on evidence-based treatment of ADHD. These included studies of the impact of ADHD children on their parents' stress and associated problems, studies of medication effects on ADHD children's cognitions, attributions, and social behaviors, studies of behavioral treatments, studies of combined interventions, and studies of dosing and sequencing effects. It was shown that clinical settings are the source of ideas for treatment studies and that the results of treatment studies can feed back into interventions in an ongoing iterative manner. I concluded by encouraging development of an evidence-based system of care for treating ADHD in Kobe, including an STP, and by emphasizing a public health approach to ADHD.

Attendees: Approximately 100 staff, students, and faculty

21:00-23:00 Dinner with Drs. Takada, Yamashita, Kitayama, Tsuneishi, Yoshioka, Mito and Mr. Ginya from the Dept. of Education in Kobe City..

December 3, 2005:

Saturday--No talks scheduled

AM—changed hotels

PM--Preparing lectures for Osaka and Tokyo

Evening—dinner in hotel

December 4, 2005:

AM Prepare afternoon lecture and Travel from Kobe to Osaka

12:00 Lunch with Drs. Wakamiya and Dr. Tanaka

14:00PM Lecture, Osaka Medical University

The STP – A Model Program for Treating ADHD: Interface Between Research and Practice

(90 min plus 30 min question and answer—simultaneous translation and handouts in Japanese)

Lecture Summary: This lecture began with an introduction to ADHD, including contemporary diagnostic practices, with an emphasis on assessing functional impairments, societal costs of ADHD, the rationale for treatment, and an overview of the components of comprehensive treatment (parent training, school intervention, child intervention, and medication if needed).

The rest of the lecture focused on a detailed description of the STP and studies that have been conducted in the STP setting that have shed light on evidence-based treatment of ADHD. These included studies of the impact of ADHD children on their parents' stress and associated problems, studies of medication effects on ADHD children's cognitions, attributions, and social behaviors, studies of behavioral treatments, studies of combined interventions, and studies of dosing and sequencing effects. It was shown that clinical settings are the source of ideas for treatment studies and that the results of treatment studies can feed back into interventions in an ongoing iterative manner. I concluded by encouraging development of an evidence-based system of care for treating ADHD in Osaka, including an STP, and by emphasizing a public health approach to this ADHD.

Attendees: Approximately 180 educators, mental health, and primary care professionals, students and parents

December 5, 2005:

AM and afternoon: Prepare evening lecture and Travel from Osaka to Tokyo

18:30 Lecture, Tokyo Medical University (hosted by the Edison Club)

What Parents Should Know and Do with their ADHD Children

(90 minutes plus Dr.Yamashita's talk plus question and answer—simultaneous translation with handouts in Japanese)

Lecture Summary: This talk was presented in simultaneous translation with slides in both English and Japanese to facilitate parent's interpretation. It involved an overview of the diagnosis of ADHD, family issues in ADHD, the outcomes of untreated ADHD children, and the key principles and components of evidence-based practice, including parent training, school-, and child-based interventions. Dr. Yamashita had described the STP in detail in his talk, so my focus was on parent training and school-based interventions that parents could pursue. A Japanese translated packet of How to Establish a Daily Report Card was distributed as a handout for parents and teachers. I concluded by encouraging development of an evidence-based system of care for treating ADHD in Tokyo, including an STP, and by emphasizing a public health approach to ADHD.

Attendees: Approximately 150 parents, teachers, students, physicians, and psychologists

Dinner with Drs. Yamashita, Miyajima, Hayashi, Mr. Awada and Kumano (Janssen Pharm.), Ms. Takayama, Ono, Shinagawa, Mizutani.

December 6, 2005:

Depart for U.S.A.

I. PROBLEM FACING JAPANESE JUVENILE TRAINING SCHOOLS TODAY

In Japan, the number of juveniles of both genders newly admitted to juvenile training schools has decreased since it marked its peak of 6,062 in 1984. However, it started to increase in 1996. In 1998, it was 5,388 (i.e. 4,863 males and 525 females), up 8.0 percent over the previous year. The number of inmates at juvenile training schools is increasing although the total population of juveniles in Japan is decreasing.

Uji Juvenile Training School, located in Kyoto Prefecture, where I had worked until March 2001, has been over congested since the autumn of 1997. The over congestion has caused a lot of problems to inmates as well as to staff. Inmates suffer from physical/mental stress while staff cannot fully perform their duties due to the relative shortage of staff. The more inmates they have to treat, the more difficult staff find it to handle respective inmates because they do not have enough time to counsel them. However, a more serious problem remains with the management of inmate groups because staff recruited in these fifteen years have never handled an inmate group of this size and do not know how to stabilize it.

II. LEGAL DEFINITION OF JAPANESE JUVENILE TRAINING SCHOOLS

The Juvenile Training School Law defines a Juvenile Training School as an institution for 1) juveniles who have been committed thereto by the Family Court as a protective measure and 2) juveniles who have to be housed up to the age of 16 in place of imprisonment sentenced by the Criminal Court. The latter were newly added owing to a recent revision of the Juvenile Law.

Juvenile Training Schools provide their inmates with correctional treatment to assist their adaptation to society. Correctional treatment (i.e. academic education, vocational training, life skills training and medical care) shall be conducted in an orderly environment, in a manner that motivates inmates to participate in it. Accordingly, correctional treatment is offered to facilitate the healthy development of mental and physical abilities of inmates, by removing risk factors of social maladaptation and cultivating their strengths. Wholesome life experiences obtained through scheduled daily life and diligent work are expected to rehabilitate juveniles.

III. TWO BASIC SYSTEMS REGARDING THE ADMINISTRATION OF JAPANESE JUVENILE TRAINING SCHOOLS

A. CLASSIFICATION SYSTEM

The Juvenile Training School Law stipulates that four types of juvenile training schools, namely, primary, middle, special, and medical, shall be established. Inmates of each type of training school differ in terms of their age, criminality and medical needs. In addition to this provision in the law, the Correction Bureau has issued administrative orders to offer a variety of treatment courses according to the diverse needs of juveniles. Consequently, treatment courses, for example, specializing in academic education, are provided.

Basic classification of juveniles is conducted at juvenile classification homes where professional clinical psychologists engage in the their assessment to render the most appropriate recommendation as to the treatment of each juvenile. This recommendation substantively determines a treatment course into which the juvenile will be enrolled. The classification system thus maximizes the efficiency of treatment at juvenile training schools by grouping inmates with similar needs.

B. PROGRESSIVE GRADE SYSTEM

At a juvenile training school, inmates are treated differentially according to their improvement, which in turn determines a grade of an inmate: Grades I, II and III. Grades I and II are further divided into two sub-grades: Grade I-Low and –High and Grade II-Low and -High. Newly admitted inmates are first placed in Grade II-Low, to be promoted to a higher sub-grade, but one who makes exceptional progress may be promoted by two sub-grades at once. Conversely, one who makes a particularly inferior mark may be demoted by a sub-grade, and, in special circumstances, by two sub-grades or more. Staffs examine daily behavior records of a juvenile to make a judgement regarding promotion/demotion.

A curriculum of a treatment course offered at a juvenile training school is staged into three periods in parallel with the progressive grade system. These periods are called, respectively, the orientation, intermediate and pre-release stages. Usually, inmates at Grade II-Low are treated at the orientation stage; those at Grades II-High and I-Low at the intermediate stage; and those at Grade I-High at the pre-release stage. Each stage has different aims and methods of correctional treatment. The progressive treatment system thus provides another venue for grouping inmates within a juvenile training school.

VI. THE THREE-PRONGED GROUP MANAGEMENT STRATEGY USED AT JAPANESE JUVENILE TRAINING SCHOOLS

Juveniles newly admitted to a juvenile training school are not well equipped with basic life skills and not yet prepared to reflect ones' own misdeeds. Also, having engaged in antisocial behavior in company with their delinquent peers, they are very much inculcated in delinquent subculture.

To change these children, we need to develop a three-pronged group management strategy, which is in line with the progressive grade system. The strategy consists of three approaches: the controlling, participatory and entrusting approaches.

A. THE CONTROLLING APPROACH

The controlling approach is used for inmate groups at the orientation stage or for other inmate groups out of the control of staff. Those inmates require comprehensive training in basic rules and behavioral expectations at a juvenile training school as well as intense and systematic guidance to help them accept the reality that they are already in a juvenile training school and realize the purpose of commitment thereto, that is, rehabilitation.

The inmates of a juvenile training school are juveniles who fail to give up their criminal way of life without being incarcerated. If the free interaction among inmates should be allowed, they would take advantage of it to exchange information on criminal activities. Therefore, the behavior of inmates at the orientation stage needs to be rigorously restricted.

The controlling approach demands a lecture-type teaching style in the classroom because domineering leadership of staff is necessary to equip juveniles with the attitude of attentively listening to staff instructions. Some may consider the controlling approach too oppressive, but still it is necessary.

The basic objective of the controlling approach is to motivate juveniles to change themselves by counterposing socially acceptable behaviors and values against anti-social ones. This contrast will enable the juveniles to face what is right.

B. THE PARTICIPATORY APPROACH

Once juveniles are equipped with basic rules and behaviors and become reflective on their life, they are prepared to be rehabilitated by the participatory approach. This approach is used for well-behaved inmate groups at the intermediate stage. At the intermediate stage, correctional treatment is provided in various groups which are organized according to units such as dormitories as well as rehabilitative activities (e.g. vocational training, academic education, and club activities).

As long as properly managed, the risk of inmate rule violation at the intermediate stage is expected to be lower than that of the orientation stage.

Consequently, inmates are allowed to enjoy greater freedom and more relaxed behavioral regulations because staffs are able to count on inmates' voluntary rule observance.

However, the ratio of controlling and participatory approaches depends on the state of a particular group. Accordingly, staff must keep a constant eye on the situation of the group. Depending on how the situation is, they are expected to properly balance controlling and participatory approaches. When they judge that the participatory approach is more appropriate, they exercise a more democratic leadership by utilizing, for example, participatory group techniques.

At the same time, group goal(s) should be established, which reflect the moral growth of the group and its members. For example, advanced group goals will be instituted when the group is mature enough to fully utilize its freedom bestowed upon it, because such freedom allows constructive opinion sharing among its members. Staff should encourage inmate groups to grow because freedom is indispensable to the fully-fledged implementation of rehabilitative activities such as group work and vocational skills training.

However, some inmates may abuse the participatory approach to such an extent that they exchange criminal *modus operandi* or pledge post-release associations. On such deplorable occasions, simple (but not so much educative) group goals such as 'No Talking without the Permission of Staff' should be adopted. In fact, in such circumstances, we need to resort to control approach again, in order to refresh inmates and rebuild a rule-abiding inmate group.

Also, in such situations, it is often the case that informal groups, with its own set of latent/hidden codes, which put at least a portion of inmates under their influence, are already formed. Since the dissolution of informal groups is a foremost task of staff, they have to suspect its development when the participatory approach fails.

The purpose of resorting back to the control approach does not purport to give inmates a lesson. Rather, the employment of the control strategy is meant to enable staff to maintain order, a necessary condition for inmates to engage in correctional programs without interference. In other words, the employment fosters the evolvement of a democratic environment ('rehabilitative milieu') in which inmates can positively interact as individuals.

In the classroom, the participatory approach asks for participatory, interactive, experiential styles of teaching. This is particularly beneficial to juvenile delinquents because they include a sizable portion of inmates highly likely to suffer from a diagnosed Learning Disabilities (LD) or Attention Deficit Hyperactivity Disorder

(ADHD), who cannot benefit much from non-interactive teaching style adopted by regular schools. I observed at the Uji Juvenile Training School that the use of the participatory teaching styles led to the increase in the interest of the inmates in learning, which in turn facilitated the improvement in rehabilitative milieu.

Since the participatory approach requires inmates to exercise individual abilities, each inmate has to bear specific responsibility to a group which s/he belongs to. An obvious example is a committee activity. In an inmate committee, an inmate may play a role of a committee leader, and another may play a role of a sub-leader. A favorite saying among team sportsmen, 'All for One. One for All', symbolizes the relationship between a group and its members when the participatory approach is functioning in good shape.

C. THE ENTRUSTING APPROACH

The entrusting approach is to be used for inmates at the pre-release stage. This approach requests staff to trust inmates and let them behave accordingly. In due course, juveniles have to deal with problems making use of social skills and knowledge, which they have acquired at previous stages. The regulation of behavior is further relaxed under the entrusting approach. The reduction in regulation requires individual inmates to take greater responsibility because democracy assumes the existence of its responsible constituents.

The staffs are expected to play a facilitative role to encourage inmates to take initiatives. Thus, the trust between the staff and the inmates will be further strengthened. However, the staff should not restrict their role as a passive watch people for rule-violations, because group norms can deteriorate at any time. Staffs constantly have to exercise their full senses to keep track of the condition of an inmate group and, if necessary, control it ingeniously.

The entrusting approach also emphasizes participatory, interactive, and experiential learning styles. One of the typical learning methods used at this stage is the 'group workshop method', which allows inmates to experience democratic problem solving.

An inmate group formed under the participatory approach can be exclusive to its non-members, although a high degree of group cohesiveness can be achieved within the group. In other words, the group may become a community closed to the outer world; only on its inside, is the democratic relationship sustained.

However, an inmate group formed under the entrusting approach should be inclusive. Its members are expected to recognize its non-members as equal human beings. Accordingly, the group is requested to be open to others, or to those who are

different from its members. In other words, the group and its members are requested to act and think globally, not locally. In this sense, the correctional treatment under the entrusting approach has global orientation.

As I have said, the group workshop method is a typical teaching method used under the entrusting approach. In a group workshop, inmates are expected to collaboratively and independently pursue a given topic, by engaging in various activities such as writing, listening, discussing, reading, creating and performing a drama. During the process, the interaction among its participants provide them with the experience of understanding or confronting each other, which in turn is expected to lead to mutual growth.

Group workshops, although not an individual-focused intervention such as individual counseling, can also raise the self-esteem of an inmate. In fact, at the Uji Juvenile Training School, I found that workshops had a positive influence upon facial expressions of inmates, making them brighter and milder.

Furthermore, I was surprised to find that workshops had salutary effects on inmates' values. For example, a juvenile who had thought that bluffing was necessary to look 'cool' confessed just before being released that doing one's best is cool.

V. CONCLUSION

The three-pronged group management strategy detailed as above is one of the most basic and valuable assets of Japanese juvenile corrections. Its use, coupled with the well-functioning classification system and the progressive treatment system, has been very effective in establishing a 'rehabilitative milieu' essential to the management of juvenile institutions. The further development and sophistication of the three-pronged approach will be our next agenda.

III. 小児科における注意欠陥／多動性障害に対する診断治療ガイドライン（案）

厚生労働科学研究費補助金
小児疾患臨床研究事業
「小児科における注意欠陥／多動性障害に対する診断治療ガイドライン作成に関する研究」
（小児－Ｈ１５－００３）
主任研究者：宮島　祐

研究課題：一般小児科医にとって有用な診断治療ガイドライン作成
担当：
１．概説と病態，アルゴリズム

１）Introduction
２）Background for this study group
３）Problems of the Diagnosis(Assessment) and Treatment of ADHD in Japan
４）Biological and genetic aspects of ADHD

【はじめに】

注意欠陥／多動性障害（attention deficit hyperactivity disorder：ADHD）は不注意と多動性，衝動性を有し，その特徴は 7 歳未満から存在する病態である。その診断は本邦においても DSM-IV(Diagnostic and Statistical Manual:米国精神医学会 1994 年)に準拠して行なわれるのが一般的である。また，同様の病態について ICD-10（International Classification of Diseases:世界保健機構）では多動性障害（Hyperkinetic Disorders）とされている。

DSM-IV による ADHD の診断基準は表 1 に示したとおりで，ここに掲げられた不注意，多動性―衝動性の各症状のうちいくつかが 7 歳未満に存在し，障害を引き起こしていること。これらの症状が 2 つ以上の状況において存在すること。また，その症状により社会的，学業的または職業的に著しい障害を認めること．さらにはその症状は広汎性発達障害や統合失調症，またはその他の精神病性障害の経過中にのみ起こるものではなく，他の精神疾患（気分障害，不安障害など）ではうまく説明できないという除外項目を設けている。DSM-IV が広く知られるようになり，実際の診療現場でそれまであいまいであった発達期にみられる行動の問題が，飛躍的に理解しやすく，診断が可能となったのは，極めて重要な事実である。しかし，ADHD は様々な疾病，障害との併存が知られており，その併存障害に伴う問題の複雑さや，鑑別の困難さも，診断が広くいきわたるようになるにつれ，臨床の現場で少なからず混乱を生じているのも事実である。さらに ADHD の治療として有効率７０％以上であり，諸外国では薬物療法の第一選択薬であるメチルフェニデート（MPH）が，本邦では保険適応となっていない矛盾が存在している。また，日常業務で多数の患者を診察する一般小児科医が，DSM-IV に準じて ADHD を診断した場合，薬物が有効であるという情報のみで MPH を処方した場合，心理的ケアを含めた包括的医療に基づく体制が必ずしも伴わないまま，症状に応じて必要以上の処方量になる懸念も存在する。これらの問題は，診断治療ガイドラインがなく，小児適応外使用のまま使用されていることが，関与していると考えられ，早急に解決することは，社会的ニーズもきわめて高く，重要である。

本研究班はＡＤＨＤの子どもたちが、確実な診断を受け、適切な薬物治療や、専門医や心理士のカウンセリング・生活指導、さらに教育機関との連携などを踏まえた、医療面・心理社会面・

教育面からの包括的医療を受けられるようにという願いから、平成 15 年に発足した.

【ガイドライン作成にいたる背景】

平成 10 年度から始まった厚生科学研究費補助金；厚生省医薬安全総合研究事業：「小児薬物療法における医薬品の適正使用の問題点の把握及び対策に関する研究（主任研究者；大西鐘壽）」において日本小児科学会分科会のうち、小児精神神経領域に関わる日本小児精神神経学会、日本小児心身医学会が合同研究を開始し（平成 13 年度より日本小児神経学会との３医学会合同研究）、平成 12 年度に小児科医を対象として「小児科における向精神薬の使用状況」の調査を行ったところ、適応外薬剤の使用（off label use）に関する理解が２５％と低いことが判明した。その一方で使用状況としてメチルフェニデート(MPH)はＡＤＨＤ治療に高頻度に使用されている実態も判明した。平成 13 年度には３医学会合同でＡＤＨＤに対する問題点の抽出をおこなった。ＡＤＨＤ診断には発達・年齢的変化を考慮した客観性のある診断基準作成が望まれていること。治療において薬物療法単独ではなく，包括的医療が重要であること。さらに現時点ではＡＤＨＤ治療において適応外使用であり，高率に出現する副作用や悪用も加味した種々問題を考慮に入れた上でもＭＰＨが治療上重要な薬剤であることも明白となった。これらの問題点を加味した上で「小児科におけるＡＤＨＤの診断・治療ガイドライン」を作成するには医学会が主体となってのエビデンス構築は重要であり、また症状の変遷、併存障害や長期予後を含めた治療体系上においても児童精神科医との連携、さらには本人、家族を中心とした包括的医療を構築する上で、心理・教育関係者など関連専門職種・機関との連携は不可欠と位置づけられた。本ガイドラインはこの理念に基づき、小児科のみならず、児童精神科、障害児教育領域など各領域から専門家が集まり、そこに海外専門家、ＮＰＯ法人のご助言もいただき、一般小児科医にとって有用なガイドラインとなるよう作成したものである。【ADHD 診断治療における現在の問題点】

１：診断は大半が DSM-IV（米国精神医学会による精神障害の分類と診断の手引き）によって行われているが、客観性に乏しいと感じられている現状がある。

２：ADHD の診断が不十分のまま、不適切な対応で放置されると、「周囲の無理解」「二次的な心の傷」「自尊心の低下」「集団での不適応」などが生じる可能性が高い。

３：ADHD の治療にしばしば用いられる MPH は、本邦では適応外薬剤であり、時に過剰使用されたり、誤用されたりなど不適切な使用がなされていることが見受けられる。

上記の問題点を解決するためには、小児科における客観性のある診断尺度を用いた診断と、薬物治療に併せ心理社会的ケア、教育的対応をも含めた包括的治療を主体とする ADHD 診断治療ガイドラインの作成が必要であると考える。

１：診断治療ガイドラインについて

現在のところ、我が国の ADHD 診断・治療ガイドラインは、上林ら児童精神科医を中心とする研究班がまとめたものが、２００３年に出版されているが、一般小児科医を対象にしたガイドラインはない。そこで、一般小児科医を対象とした診断治療ガイドラインを、先行する諸外国との連携を下に調査をし、本邦の実情に最も適合していると考えられるニュージーランドのガイドラインをもとに、医療者だけでなく、教育・親の会などの関係者も交えた意見を入れて作成しよう考えた。一方、児童精神領域での精神保健研究および文部科学省による学校での対応ガイドラインも並行して行われており、実際の臨床場面で効率よく成果を挙げることが重要と考え、これら関

連研究班と連携し作成した。小児科領域では特に、心のケア・生活のサポートを欠かすことができず、薬物療法に偏らない心理面での治療体系をも組み入れた包括的治療を主体としたガイドラインを作成することが重要と位置づけた。
本研究班の研究は精神神経疾患研究（児童精神領域）および文部科学省（学校での対応ガイドライン）と並行して行われており，目的は近接しているが、対象は異なっており、本研究班の成果は一般小児科医にとって有用と考えられる。
本邦において多数存在する小児適応外使用医薬品の中でも、ＡＤＨＤに対する有効性が７０％以上であることが明白であるＭＰＨが、未だ適応申請がなされない現実は、小児医療に関わる医療者、保護者にとって大きな問題である。またＡＤＨＤ治療が単に薬物療法に頼るのではなく、包括的医療が重要であることを広く啓発していくことも重要な課題である。それら問題点の打開策として臨床現場、特に子どもの発達に関わる一般小児科医が理解しやすく、使いやすいＡＤＨＤに対する診断治療ガイドラインの作成は不可欠である。本研究班の成果により、子どもたちによりよき医療環境が構築されるよう期待する.

ＩＩ．病態（生物学的背景）

注意欠陥／多動性障害（attention deficit hyperactivity disorder : ADHD）の病態・病因を考える場合、まず前提として、ADHD は子どもの行動上の問題点から規定された障害であり、この概念が症状群であることを忘れてはならない。

ADHD の特徴である多動性、衝動性や不注意を呈する医学的要因として、遺伝性、環境物質、未熟児など脳構造上の問題、感染による脳機能異常、画像検査では描出できないような微細な脳損傷などがあげられている。また虐待、愛情剥奪、家庭内の混乱やてんかんなどにより、二次的に ADHD にみられる多動性や衝動性などが出現することが知られており、ADHD の原因を論ずる上でこれら症状表出の背景を理解する必要がある。

一方，ADHD に対する MPH など有効薬剤の薬理学的作用機序から病因を解明しようとする試みが近年活発になっている.

（１） 遺伝的要因

実際の臨床場面で、子どもの問題行動をチェックしていると、保護者のいずれか（多くは父親)が、自分の子ども時代にまさしく当てはまる。と答えることは少なくない。あるいはきょうだいが診察室に入ると、まさに同じように多動性を示すことはしばしば経験し、欧米においてもこれらの見解（Cantwell）が従来より報告されている。また Gills らは一卵性双生児において、一児が ADHD であるとき､他児も ADHD である確率は双生児でないきょうだいに比べて 11～18 倍になると報告している｡また Gjone らによる大規模な双生児研究において ADHD は約８０％の遺伝率があると報告している.これらの双生児研究のデータは ADHD の症状発現に遺伝的要因が存在することを明確に示している. しかし，その一方で ADHD の非遺伝的要因として，未熟児，妊娠中の母体の飲酒と喫煙などがあげられ,特に前頭前皮質の脳障害を生じるような病態において ADHD 様症状が認められることからも，その症状出現のメカニズムは、遺伝的にも決して単一ではない複数の遺伝子による多因子遺伝と環境要因が関与するとの説が有力とされている。

（2） 環境要因

乳幼児期に児童虐待や愛情剥奪など劣悪な養育環境で育てられた子どもが ADHD と同じような行動特徴を示すことがあることは知られている。これが DSM-IV の分類でも発達障害のカテゴリーではなく小児崩壊性行動障害に分類される理由のひとつとされる（宮本）。特にシナプスの形成や髄鞘化など脳形成上重要な 2－3 歳頃までに、劣悪な養育環境にあってはその心理的要因はもとより、外傷、二次的な栄養障害、感染などが関与し，児の健やかな成長を妨げ、さらには前頭前皮質の脳障害をも引き起こし，行動上の問題を呈することが考えられる。しかし、このような環境下で成育しても決して全てが ADHD の症状を示すわけではないことも当然の事実であり，環境要因のみで ADHD が形成されるとは考え難い。

（3） 構造的・機能的要因

ADHD は自己抑制あるいは自己をコントロールする機能の不全状態から生じる反応遅延の障害であるという考え方がある。その構造的・機能的問題として、ドパミン作働薬である中枢神経刺激剤（アンフェタミン、メチルフェニデートなど）が有効であることからも、ドパミンが関与する背外側前頭前野皮質－尾状核－淡蒼球－視床と続く神経回路の障害に由来すると考えられている。

近年，画像診断の飛躍的進歩により，ADHD 児（者）における脳内の障害部位について様々な報告が散見されるようになった. Castellanos らは，右前頭前皮質や小脳の一部，大脳基底核（尾状核，淡蒼球）などが有意に小さくなっていることを報告し，Sieg らは SPECT により右前頭葉～右頭頂葉の血流が左側に比較して低いことを報告している。また PET による研究では ADHD において前頭葉で糖代謝が低下し、中枢神経刺激剤投与によりその代謝が改善したとの報告がみられ、機能的 MRI による研究では、課題負荷に対する前頭葉帯状回の前方における活性化が ADHD は対照群に比較して低いとの報告もみられる。右前頭前皮質は行動を調整し，自意識や時間の概念の発達に関与し，尾状核・淡蒼球は反射的な反応を抑制するとされており，ADHD の病態において重要な役割を果たしていると考えられる.

中枢神経刺激剤（アンフェタミン，メチルフェニデート）の少量投与が ADHD の他動性の改善に約７０%において有効であることは実証されており，ADHD のドパミン仮説の根拠となっている. 脳の神経伝達物質であるドパミンは感情や運動に関わるニューロンの働きを調整する作用がある. 前述のように行動の調整に関与している前頭前皮質や大脳基底核においてドパミン受容体およびドパミントランスポータが作用しており，ドパミンはドパミン受容体に結合することで情報伝達の役割を果たし，一方ドパミントランスポータは神経伝達物質放出ニューロンから突出し，使用されなかったドパミンを再取り込みする作用がある. 従来からの研究では，このドパミントランスポータが過剰なために，ドパミンによる情報伝達が不十分となり，多動や不注意が生じると考えられており，有効薬剤であるメチルフェニデートはドパミントランスポータに拮抗することによりドパミンの作用を促進し，その結果，多動の軽減，集中力の向上が得られると考えられている.

一方，ADHD の症状を示す高血圧自然発症ラット（SHR）が知られており，このラットではドパミン系，ノルアドレナリン系ともに異常が認められている.　また ADHD 患者においてノルアドレナリンの作用が対照群に比較して乏しいとの報告がある. シナプス前ノルアドレナリン再吸収選択性阻害剤(atomoxetine)は米国FDAが非中枢神経刺激薬として初めて承認したADHD有効薬で,

中枢神経に対して直接刺激作用は持たず，前シナプスにおいてノルアドレナリンの再吸収を阻害することにより脳内アドレナリンを増加させ，ADHD の症状を改善すると考えられている.

（4）対人関係の悪循環

ADHD は、その診断自体が「精神年齢に比較して不適当な注意力障害、衝動性、他動性を示す」ことによる以上、様々な原因が存在することは明白である。発達期の脳の構造的・機能的要因に遺伝的・環境的要因が絡み合い、その行動上の特徴から日常の生活状況において、関わりにくさに伴う環境的悪循環がその症状の増強・促進因子になると考えられる。ADHD が社会的に問題になるのは、他動性や不注意など本来の症状ではなく、認知面でのアンバランスや集団では行動できないなどの社会的行動の問題，対人関係の問題，精神・情緒面の問題などである．すなわち ADHD 本体の症状が社会的問題となるのではなく，まさに環境的要因により症状は増悪すると考えられる．我々医療者が ADHD の診断・治療に関わる際、児の特徴を理解し、単に薬物療法をすることが治療ではなく、児の養育に関わる保護者とともに，この悪循環を断ち切ることが、二次的な合併症の予防・改善、しいては ADHD 児の生活の向上につながることを理解することである。

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I.　診断のアルゴリズム（案）