

Consensus Report for Workshop on “Early Diagnosis and Intervention in Cerebral Palsy” Turkey’s Approach to Babies at Risk and Suggestions

1. National Congress on Babies at Risk (1-4 March 2018, The Ankara Hotel)

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Received: 11.06.2018

Accepted: 17.08.2018

Available online: 31.08.2018

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ABSTRACT The workshop on “Early Diagnosis and Intervention in Cerebral Palsy” aimed to reflect the current situation of and the challenges encountered in the early diagnosis and intervention in cerebral palsy in babies at risk, in order to raise awareness in the corresponding community by putting forth suggestions for providing solutions to these problems, and also, to provide a model suggestion suitable for the whole country. In the direction of these purposes, problems encountered in the prenatal, natal, and postnatal periods, and the corresponding suggestions were discussed, and vital topics concerning numerous disciplines, especially for the post-natal period, were emphasized in the workshop. With the aim of providing a solution to the current problems in the country regarding the matter, by employing an interdisciplinary approach, the establishment of Monitoring Centers for the Babies at Risk was proposed, and a model for these centers was created. Implications derived from this workshop will establish a foundation for the creation of a special strategic plan for the early diagnosis and intervention in cerebral palsy for the babies at risk.

Keywords: Babies at risk; premature; neuromotor development; developmental retardation

Cerebral palsy (CP) is defined as the permanent loss of motor skills, which occurs in the prenatal period, and is non-progressive, although having the possibility of changing with age.¹ CP may be spastic, ataxic, dyskinetic, or a blend of the aforementioned types, depending on the type of movement disorder. In the CP patients, loss of motor skills is usually accompanied by other physical, sensory, cognitive, communication, perception, and behavioral disorders. While the majority of the children with CP may exhibit improvement in their condition with time, the condition of a few children may deteriorate with time due to certain other problems that might arise.²

CP is the most common physical disability in the childhood period. General public-based studies have revealed that the worldwide prevalence of CP is around 1.5 to 5 per 1000 live births.³⁻⁵ No comprehensive statistics are available for the prevalence of CP in Turkey. In a report published by Turkey Statistical Institute in 2014 regarding health issues among children, under the title "Statistics on Children", CP was classified under the "others" branch and was assessed alongside mental retardation, learning disabilities, autism, and congenital hip dislocation. According to this report, the prevalence of the aforementioned disorders among the children between the age of 0 and 6 was about 3.1%.⁶ A study conducted with 41,861 children in the age group of 2-16 years belonging to different regions of Turkey, in 2006, reported a prevalence of 4.4 per 1000 live births of CP.⁷ Premature birth is considered one of the most important risk factors for CP and according to the data provided by the Ministry of Health, the rate of premature births among the live births is around 15.8%.

CP is a significant medical and socioeconomic problem for the children, families, and the general public.⁴ CP is usually accompanied with widespread co-morbid conditions. The brain plasticity in the early childhood period allows an intervention for the loss of motor skills and other accompanying problems to yield significantly positive results, and as a result, the patient's transition to adulthood may

be achieved in the most beneficial way.^{5,8} This is possible with the availability of sufficient infrastructure for an early diagnosis and a multidisciplinary intervention. However, on an average, CP is diagnosed at the age of two years.⁹ This age figure could be much higher depending on the different regions, the socioeconomic status of the patient, and the level of access to medical care. Given the fact that brain plasticity is at its highest during the first 12 months post birth, the importance of an early diagnosis and intervention becomes evident.¹⁰ It has been demonstrated that a delay in the diagnosis and intervention causes negative effects on the patient's motor skills in the long run, and therefore, results in increased dissatisfaction in the family and psychological problems in the children.¹¹

As a result of recent international-level studies, guidelines for early diagnosis and intervention in CP have been established, and the clinical validity for the implementation of these guidelines has also been demonstrated.^{8,12} In these guidelines a standard definition has been provided for the babies that are to be considered at "high risk of CP" even when they may not have received a certain diagnosis, and also, it has been suggested that the monitoring of such babies must begin before the age of five months and the babies be taken into early rehabilitation.¹² Given that the most important risk factors for CP are low birth weight and premature birth, close monitoring of these babies that are at significant risk of CP is vital.³ In order to obtain an early diagnosis, abnormal values obtained in neuroimaging, standard neurological assessments, and motor examinations should be inferred as the presence of CP.¹² In the patients who receive an early diagnosis of CP, it is possible to preserve optimal motor and cognitive skills, and prevent secondary complications through an immediate intervention.¹²

Assessment of the services for babies at risk and CP patients in Turkey, and the creation of a systematic approach for diagnosis and intervention in CP, were first discussed in the year 2014, in the workshop on "**Türkiye'de Erken Çocukluk Rehabilitasyon Hizmetlerinin Değerlendirilmesi**" (Assessment of Early Childhood Rehabilitation

Services in Turkey), which was organized in Ankara and was attended by relevant ministries, institutions, respective university departments, professional associations, and non-governmental organizations.¹³ In this comprehensive workshop, a standard definition of the babies at risk was formulated, and the current problems encountered in the process of CP diagnosis and assessment were summarized. Additionally, the importance of multidisciplinary and interdisciplinary approaches was emphasized, and the definitions regarding these approaches were formulated. In this framework, detailed suggestions for the creation of a roadmap and a national action plan for the assessment of babies at risk were provided.¹³ This workshop served as a crucial step in the direction of finding solutions to a critical health issue in the country, although in the following time course, no further study has been performed and no national action plan has been implemented in relation to the diagnosis, assessment, and monitoring of the babies at risk, especially the babies with CP.

Considering the insufficient efforts in this field, a workshop on “Early Diagnosis and Intervention in CP” was held in the scope of National Congress of Babies at Risk, in Ankara during 1-4 March 2018. This workshop was attended by the relevant specialists, and following a summary of the current situation on the issue at hand, the suggestions regarding the problems were voiced. The conclusions reached in this workshop have been documented in this consensus report, with the aim of contributing to the creation of a national action plan for the CP patients and the babies at risk.

PURPOSE

This workshop aimed to reflect the current situation of and the challenges encountered in the early diagnosis and intervention in CP in babies at risk, and to raise awareness in the corresponding community by putting forth suggestions for solutions to these problems. In line with this aim, the following goals were identified:

1. Identification of the current problems associated with the early diagnosis, intervention, and the monitoring processes for babies with CP.

2. Defining the expectancies and suggestions for these problems.

3. Offering a model for the diagnosis, intervention, and monitoring of the babies at risk, that would be suitable for our country in particular.

In the direction of these goals, problems encountered in the prenatal, natal, and postnatal periods and the corresponding suggestions have been discussed, and the vital topics concerning numerous disciplines, especially for the postnatal period, have been emphasized.

1. PRENATAL PERIOD

The prenatal period predominates in the scope of gynecology and obstetrics (KHD). In this period, the risk of a legal issue arising between the patients and the doctors is high.

The most crucial problem encountered in this period regarding the baby is the mother-oriented approach of the KHD doctors. There have been significant developments in the last ten years in the area of viewing the fetus and the mother as a single unit. Nowadays, the fetus is considered as an individual patient, and although novel steps are being undertaken in this direction, yet a great deal of efforts is required to eliminate the mother-oriented approach of the KHD doctors. The KHD doctors possess limited knowledge on the postpartum monitoring of the babies at risk, because of which these doctors are not in a position to refer the patients to the relevant prenatal branches and doctors. In order to resolve such problems, rotations in the neonatal and pediatric neurology departments should be included in the KHD education. The neonatal rotation would provide the KHD doctors the experience on the importance of prenatal monitoring of the babies at risk, getting the detailed risk history, and an early intervention, while the pediatric neurology rotation would provide them the opportunity to observe the condition of the babies with CP in their older ages.

Majority of the babies at risk are not foreseen in the prenatal period. It is of critical importance that detailed investigation of the risk factors be conducted by the KHD doctors in order to identify the babies at risk during the prenatal period or

to determine whether the case is idiopathic. In recent studies, a novel gene region corresponding to CP has been identified, and it has been claimed that the disease might have a genetic basis.¹⁴ In order to assess these probabilities, obtaining a detailed prenatal report is essential. In such reports, questions related to relatives having CP, a history of difficulty during birth, and any movement/speaking disorder history should be inquired about. The presence of CP or a neurological disorder in the first-degree relatives increases the risk of CP by 14 folds in the baby, while the presence of CP in the second-degree relatives increases the risk by 7 folds.

Communication issues are usually observed between the KHD clinics and the newborn units. If the babies are identified as “at risk” during the prenatal period, the doctors must inform the families of the babies about the condition during the period prior to birth, thereby preparing the families for the natal and postnatal periods. The birth of such babies must occur at suitable places, with sufficient equipment and a newborn specialist, and the newborn unit must be informed about the condition in advance. In the case of hypoxic babies, it should be taken into consideration that the interventions that are conducted in the first 6 h post-birth are critical.^{15,16}

Most of the times, the families of babies with CP blame the KHD doctors for the condition. This

problem could be minimized by educating the general public about this condition. In order to achieve this purpose, people should be educated through the inclusion of topics of pregnancy and the risk factors involved in it in the syllabus of high school education, through public service advertisements, and through the establishment of pregnancy education centers for educating a pregnant woman. In certain cases of pregnancy, pregnant women should be assessed and informed by councils. Even if no risks are identified at the onset of pregnancy, families should be informed about the possible risks that might manifest later. Although the documents explaining such risks to the pregnant women are present in all the KHD clinics, these documents are not read in the emergency situations and hold no legal legitimacy. Therefore, the families must be provided with detailed information regarding the risks of pregnancy. Moreover, family doctors should be trained regarding follow-ups for pre-pregnancy and risk-free/risky pregnancy, and the implementation of these follow-ups should be ensured (Table 1).

In Turkey, there is no standard definition for a baby at risk. Moreover, the incidence of babies at risk and CP, and their regional distribution are not known. The current situation in the country regarding this matter must be statistically put forth along with the general public- and hospital-based studies. With consideration of the conclusions reached in the workshop conducted in 2014, a na-

TABLE 1: Problems in prenatal period and advice for their solution.

Current Problems	Suggestions
Traditional mother-oriented approach to pregnancy	Improving the education on childbirth and pregnancy, adding neonatal and pediatric neurology rotations to education period
Inability to foresee babies at risk in the prenatal period	Collecting detailed information about the risk factors by a gynecologist
Communication problems between a gynecologist and the newborn unit	Reporting babies at risk to the newborn unit starting from the prenatal period
The lack of education among the general public and pregnant women about babies at risk and legal problems stemming from this situation	Organizing educational programs for pregnant women and the general public, providing training for family doctors Integrating pediatric development specialists into primary health care services in order to provide training for pregnant women regarding child development and care, risks affecting health and development, and developmental problems
Regarding the definition of the baby at risk, there is no standardization, epidemiological data, and national strategy	The current situation in the country should be statistically put forth with the general public- and hospital-based studies National strategic planning must be made (e.g., Autism National Action Plan) An umbrella association for babies at risk should be founded

tional strategic plan should be devised.¹³ In this context, the Autism National Action Plan could be considered as an example. This plan includes the establishment of an early diagnosis, therapy, and intervention chain, raising awareness among the families, individuals, and the general public, and providing education regarding the autism spectrum disorder (ASD), and it has been implemented recently under the leadership of the Ministry of Family and Social Policies and the support of all relevant institutions.¹⁷ In order to create a similar plan for the babies at risk, the associations specializing in this field should convene, formulate a plan, and implement the plan under the corresponding ministries. There have been leading efforts in this direction by the Turkish Association of Neonatology in 2014 and 2015, with the contribution of the same association, the Guide for Monitoring Babies at High Risk was published by the Child and Teenager Health Department, Public Health Agency of Turkey, Republic of Turkey; and the guide is being updated regularly.^{18,19} In addition to this exemplary guide for the prenatal period, a national action plan for the babies with CP and babies at communal risks must be created with contributions from all the relevant associations. Moreover, creation of an association, considering the CP professional associations in other nations as an example (e.g., AACPDM-*American Academy for Cerebral Palsy and Developmental Medicine*), which could serve as an umbrella, might generate the necessary awareness and organization in terms of creating a national strategy and may promote the interdisciplinary work by bridging the gap among various disciplines.

2. NATAL PERIOD

Natal period is crucially important in CP diagnosis and early treatment, as the first assessments and interventions for the babies are performed in this very period. On the basis of the baby's clinical condition, the length of stay in these units might vary. An early preterm baby's stay in the newborn units might extend up to several months.

One of the most prominent problems encountered in the natal period is the transfer of the baby to the newborn unit. Transferring the baby post

birth is challenging and risky. In order to deal with this problem, in the cases of risky pregnancies, the patient should be brought with the special pregnant transfer, and the birth should occur in a setting with sufficient equipment.

Another problem with the newborn units is that the families are not able to participate in the process due to limited physical space. Mother-baby adaptation rooms, which are a must for these units, are not popular yet. Furthermore, enough personnel to provide training to the families during this process are not available. Since there is a shortage of time and personnel, mother's psychology is often neglected. Families are not able to participate in the therapy processes, which require long periods of stay in the newborn units, especially in case of therapies for premature babies.

As in the prenatal period, healthy communication between the neonatal and gynecology disciplines holds significant importance during the natal period as well. In the natal period, while the families, on one hand, prefer the gynecologist with whom they have had close contact during the prenatal period to be integrated into the process, the neonatal doctors prefer to run the process all by themselves. These communication issues could be solved by educating the families beginning from the pre-pregnancy period itself, and allocating more time for education regarding newborn babies in gynecology (Table 2).

The first neurological examination of the babies at risk is performed in the newborn units. This first examination holds vital importance in the diagnosis of CP. In certain patients, abnormal neurological examination findings might be observed due to certain medical problems other than CP (e.g., metabolic problems). Therefore, the first neurological examination must be performed by a pediatric neurology specialist during the natal period on a comprehensive scale. Moreover, in order to enable early intervention for CP patients in the postnatal period, prior to discharge from the hospital, while the patient is in the newborn unit, the family should be referred to a pediatric neurologist.

TABLE 2: Problems in natal period and advice for their solution.

Current Problems	Suggestions
Transfer of baby to newborn unit	In risky pregnancies, the patient should be brought with special pregnant transfer and birth should take place in a setting with sufficient equipment
Family cannot take part in the process due to lack of physical space and personnel	Mother-baby adaptation rooms should be present in every newborn unit, number of supporting personnel should be increased
Communication problems between neonate and gynecology disciplines	Educating the families starting from the pre-pregnancy period and allocating more time for a newborn baby in gynecology education
The first neurological examination not being comprehensive enough	Making the first examination by a pediatric neurology specialist during the natal period, by taking metabolic and other probable problems into account
Patient not participating in pediatric neurological follow up right at the end of their natal period	Before the patient is discharged from the hospital, while in the newborn unit, the family should be directed to a pediatric neurologist

3. POSTNATAL PERIOD

Postnatal period holds particular significance for CP patients and their families, as this period concerns multiple disciplines and encompasses the critical time to initiate an early intervention. However, there are numerous problems associated with this period, including late diagnosis and insufficient monitoring. Even in the central locations which have well-developed hospitals, it is common to find 3-year-old patients that are yet to receive a diagnosis. Moreover, there are limitations regarding the diagnosis and treatment of mental problems and the visual and auditory disorders that may accompany CP. Besides this, the general public, families, and doctors are not aware of the importance of early rehabilitation of the CP patients. The critical period (opportunity window) for physical therapy and rehabilitation is one year, and while it is possible to achieve significant improvements with a rehabilitation that is commenced within this period, children usually lose a great amount of time during this period, and the effects of rehabilitation decrease due to this delay. In certain cases, even though the family identifies the problem in the child, the family doctor or the pediatrician might fail to diagnose the problem. Similar to the general public and the families, the primary care physicians are also inclined to follow the “it-will-pass-with-time” approach. In order to bring this critical health issue under control, education and training of the general public, the families, and the doctors are essential. In order to increase the impact of this education, family health centers and media should be actively involved, and

education programs that would be able to attract the attention of the general public must be developed.

The people that deal the most with the CP patients are the family doctors. Therefore, the family doctors should be educated in a way that they are able to correctly assess risky pregnancies and babies with CP. The family doctors must be able to differentiate between what is normal and what is pathological, and should be able to refer the pathological findings. Also, the pediatric development specialists graduated from Health Sciences Faculties may work alongside the family doctors, and assist in the early recognition of developmental problems and forwarding such cases to the corresponding units and services after assessing the development of baby’s motor skills and the psychosocial risks involved. Job definition of the pediatric development specialists, who play a crucial role in the monitoring of the babies at risk and the CP patients, is not clearly known. Although there are sufficient pediatric development specialists, their employment does not match the level of requirement. Furthermore, the pediatricians, who participate widely in the monitoring of the babies at risk, should be subjected to specialized in-service training. In order to prepare the future doctors for CP cases, the topic of monitoring of the babies at risk in the medical syllabus should be reviewed thoroughly and focused on further.

Although pediatric neurology is the medical discipline that deals directly with the follow-up with patients in the postnatal period, the disci-

plines such as pediatric metabolism, developmental pediatrics, child development, physical therapy and rehabilitation, physiotherapy, and pediatric psychiatry should also be included in the process. The most important reason for the underperformance of services in this period is the communication gap among the different disciplines. Establishing interdisciplinary communication for individual patients may cause communication gaps in a short period of time. A multidisciplinary approach is usually not put into practice. Instead, in order to include these disciplines in the process, a transdisciplinary communication layout, an interdisciplinary organization run by a coordinator must be employed. Therefore, for the coordination of neurological disciplines, which are adequate in terms of their number and distribution, a **Monitoring Center for the Babies at Risk** should be established. In the current practice, CP patients are placed in the pediatric neurology pool, and the special education reports of the patients are issued by the pediatric neurologists. Developmental Pediatrics, a novel branch with a limited number of specialists, must be present in these centers, even if the branch does not participate in the coordination.

While establishing the Monitoring Centers for the Babies at Risk, the results of the workshop conducted in 2014 should be taken into consideration.¹³ It is important that these centers be established, supported, and audited under the control of the Ministry of Health. In Turkey, different regions differ in terms of the socioeconomic status and access to health care services; even the cities and the rural areas within the same region differ in these terms. These differences should be considered, and solutions to these differences should be developed during the establishment of the Monitoring Centers for the Babies at Risk. In the city hospitals, which are at the initial stage of establishment, these monitoring centers may be established in a layout where the related branches are present in close proximity, so that the operating could be commenced in a short period of time and the requirement of visiting from one unit to another in the hospital would be eliminated. Moreover, on the basis of specific requirements of a region, areal units must be created and

the Monitoring Centers for the Babies at Risk could be established in those areal units. An example of a layout for the Monitoring Center for the Babies at Risk has been provided in the appendix of the present report.

The collection of the information regarding the babies at risk should be commenced from the prenatal period, and this information should then be interpreted and assessed in multidisciplinary councils. In these centers, follow-up should be conducted with patients that were guided by a gynecologist in the risky pregnancy period, by a neonatal specialist during the natal period, and by a pediatric development specialist and family doctors in the subsequent periods. It is convenient for the families of the patients to have one center and a coordinating doctor as a single point of contact, increasing the patient follow-up as a consequence.

In addition to their primary duties of monitoring and coordination, the Monitoring Centers for the Babies at Risk should participate in the planning and execution of the public- and hospital-based epidemiological studies conducted for the babies at risk, as well as in the education and training of the general public, families, and the doctors. In this context, a compulsory rotation of different specialties is recommended.

Physiotherapy constitutes an important part of the therapy and monitoring of the babies with CP. As soon as a baby at risk is diagnosed, the patient should be referred to a Physical Medicine and Rehabilitation doctor, and the rehabilitation program should be commenced in the incubator. This is because the positioning of the newborn babies with CP holds critical importance in terms of their prognosis.^{20,21} The baby at risk should be included in the rehabilitation program simultaneously while the etiology is being investigated. Since neuroplasticity, which is invaluable for the rehabilitation, is at its peak during this period, this time window should not be missed due to waiting for a definitive diagnosis. There is a requirement for a standard assessment scale for the developmental evaluation of the babies at risk during their diagnosis and physiotherapy period. With this scale, it would be possible

APPENDIX: Personnel and equipment that must be present in centers for babies at risk.¹**The Purpose of Centers for Babies At Risk:**

- Recording and monitoring of babies at risk starting from pregnancy.
- Minimizing the burden of CP on the individual, family and the general public by early (<5 months) via CP diagnosis and intervention.
- Ensuring the interdisciplinary coordination of prenatal, natal, and postnatal monitoring of babies at risk.
- Planning and execution of public- and hospital-based epidemiological studies regarding babies at risk.
- Planning and execution of education for families, pregnant women and the general public.

Patients in the service extent of Centers for Babies At Risk:

Pregnant women at risk, babies at risk, patients with CP and their families

Official body with that Centers for Babies At Risk are affiliated:

The Republic of Turkey, Ministry of Health

Number and location of Centers for Babies At Risk:

Centers should be incorporated in City Hospitals, Training-Research Hospitals, and University Hospitals. The number of centers shall be determined based on the population density of each region.

The personnel that should be present Centers for Babies At Risk:

Pediatric neurologist (Coordinator)

Neonate specialist

Gynecologist

Developmental pediatrician

Child development specialist

Physical Medicine and Rehabilitation Specialist

Physiotherapist

Pediatric psychiatrist

Obstetrician/breastfeeding consultant

Nurse

(Depending on the patient's other medical problems, support from other disciplines should be taken)

¹Regarding the centers in question, these details are present in Rehabilitation Workshop Conclusion Report: In the hospitals providing tertiary care services, there should be a "Monitoring Center for Babies At Risk". Babies should be monitored multidisciplinary in these polyclinics. The monitoring of babies that received primary and secondary neonate intensive care can be done via neuro-developmental follow up by a pediatrician and if the need arises by a pediatric neurologist and other disciplines in the same institution. It is beneficial to have a pediatrics specialist*, pediatric neurology specialist*, neonate specialist, physical therapy and rehabilitation specialist*, physiotherapist*, developmental pediatrician, pediatric psychiatry specialist, ophthalmology specialist, language-speech therapist, audiologist*, psychologist, ergotherapist, pediatric development specialist*, dietician, social service specialist, otorhinolaryngology specialist, orthopedist and brain and neurosurgeon in the team that is performing the follow up of babies that are monitored multidisciplinary.

* It should be compulsory to have these branches in Monitoring Polyclinics for Babies At Risk. If these specialists cannot be present in the same center, a team member that is working in the same city in the required specialty area must be assigned to this center (as a consultant).

to compare the situation in the past with the situation at present. In several centers, the follow-up information related to monitoring is available only for a limited number of babies and the annual development tests are also inadequate. The designation of the assessment scales, which would specify the branches and the disciplines involved (neonatal doctor, pediatric neurologist, physical medicine and rehabilitation doctor, developmental psychiatrist, pediatrician, ophthalmologist, physiotherapist, pediatric development specialist, and other required specialty fields), and the scales on which the babies with CP would be evaluated, might assist in achieving standardization.

Another important and continuing problem observed in the physiotherapy of babies with CP is the challenges encountered in the reimbursement to private centers by the state, especially the reimbursement of long-term physiotherapy applications. If the babies with CP require receiving long-term physiotherapy beginning from their neonatal period, the session time and the number limit in the Health Practice Communiqué (SUT) are the limiting factors for such patients. Moreover, SUT does not allow the baby to receive physiotherapy without being diagnosed first. In order to increase the time spent in physiotherapy, in addition to finding a remedy for the aforementioned

problems, physiotherapy should be extended to the other parts of the day by training the families as well.

Although physiotherapists are available in sufficient numbers, their employment is low. In several hospitals, no child physiotherapist is present. In private hospitals, due to profitability concerns, the requirement for physiotherapy is usually questioned, and therefore, physiotherapy plays a limited role in such hospitals. Increasing the employment of physiotherapists would provide the babies with CP the means for better access to physiotherapy.

Another problem encountered in the postnatal monitoring is difficulties in issuing special education report for children with CP. In Turkey, there is no SUT code for the “baby at risk” diagnosis in the current diagnosis system for babies. The other codes do not match with CP as well. This problem prevents the patients from getting the full benefit at right time and to beginning their physical therapy and special education in time. As a provisional solution, a report may be issued with the code

“R.062-Lack of expected normal physiological development” in ICD 10, so that the babies are able to receive physical therapy. There might be a continuity problem post 90 sessions; however, the diagnosis could be changed post two sessions, and the report could be re-issued. Development tests and newborn physiotherapy do not exist in the extent of SUT, which renders early intervention difficult. This problem must be addressed as early as possible. As a permanent solution, a regulation for Çocuklar ve Gençler İçin Özel Gereksinim Raporu (Special Requirement Report for Children and Teenagers) was formulated, although it has not been implemented yet.²² This technical problem should be resolved through applications to the Ministry of Health via associations (Table 3).

Another issue is that the service provided by the state for each report issued for the babies at risk who receive early diagnosis and require receiving early physiotherapy and early education, allows only two sessions (45 min each) for each child, even if the child has developmental issues related to multiple areas and the problems are rather com-

TABLE 3: Problems in postnatal period and advices for possible solutions.

Current Problems	Suggestions
The frequency of CP patients with late diagnosis	Education and training of the general public, families, and doctors
Inability to early start the special education, physical therapy, and rehabilitation, and lack of proper implementation of these	Education and training of the general public, families, and doctors Initiating the physical therapy in the newborn period Increasing the employment of physiotherapists Revision of the SUT in order to reduce the limitations on physiotherapy
Lack of monitoring, the communication gap between disciplines	Establishment of Monitoring Centers for babies at risk for the coordination pediatric neurology Use of standard assessment scale and development Giving the more active role to pediatric development specialists in the monitoring process
Treatment of the medical problems accompanying CP is insufficient	Referring the patients to respective disciplines under the organization of Monitoring Centers for Babies At Risk and follow up of these babies
Challenges in issuing special education report for CP patients Lack of CP data for Turkey	Revision of SUT Planning and execution of public- and hospital-based epidemiological studies for babies at risk with the coordination of Monitoring Centers for Babies At Risk
Qualitative and quantitative insufficiency of the support teams appointed after assessment and monitoring	Implementing personal support plans designed for an individual baby considering its individual needs and negotiating with the Ministry of National Education, increasing the number of support services which are currently limited to two sessions per week

plicated. In this respect, the variety and the frequency of such services should be regulated as per individual requirements of every patient, and cooperation from the Ministry of National Education should be planned in order to reimburse such services by the state.

RESULT

“Workshop on Early Diagnosis and Intervention in Cerebral Palsy” was held within the scope of National Congress on Babies at Risk, in Ankara, during the period of 1-4 March 2018, with the attendance of relevant specialists. In this workshop, the current situation of the approach toward the babies at risk in the country (Turkey) was summarized, and the problems in the prenatal, natal, and postnatal period along with the corresponding suggestions for these problems were discussed. The suggestions provided in the workshop have been summarized below:

- Education programs for pregnant women as well as the general public must be created; family doctors, pediatricians, and medical students must receive training regarding the babies at risk.
- A strategic plan must be devised for the diagnosis and monitoring of the babies at risk (e.g., Autism National Action Plan).
- Monitoring Centers for the Babies at Risk should be established in coordination with pediatric neurology.
- Distribution and prevalence of the babies at risk and the CP patients in Turkey should be statistically put forth along with the general public- and hospital-based studies.
- An umbrella association for the babies at risk should be established.
- Rotations to neonatal and pediatric neurology must be included in the gynecology education.
- Risk factors for CP should be inquired in detail by the gynecologist.
- Babies at risk should be reported to the newborn units beginning from the prenatal period.
- In risky pregnancies, the patient should be brought with the special pregnant transfer, and the birth should occur in a setting with sufficient equipment.
- Mother-baby adaptation rooms should be present in every newborn unit, and the number of supporting personnel should be increased.
- The first neurological examination must be performed by a pediatric neurologist during the natal period.
- The family should be referred to a pediatric neurologist while the baby at risk is in the neonatal unit.
- Physiotherapy and early support/education should be commenced in the neonatal period.
- The employment of physiotherapists should be increased.
- The limitations of SUT regarding the babies at risk and physiotherapy should be resolved.
- Standard assessment scales and development tests should be utilized in the monitoring of CP.
- Child development specialists and developmental pediatricians should have increased participation in the monitoring of the babies at risk.

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