

The Work of HPS for a Child Who Undergoes Wada Test

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I. Introduction

“The Epilepsy Service Center” in General Hospital A, opened in April 2008, was designed to provide comprehensive services for people afflicted with epilepsy. The center is one of few facilities where the departments of epilepsy surgery, neurology and pediatric neurology work together and the treatments that they offer attain some progress even in cases of intractable (refractory) epilepsy. Because of such characteristics, many patients from other prefectures visit the center. Among those visitors, children in particular tend to experience great anxiety about the unfamiliar setting and people around them.

It was the first time that HPS was requested to practice some play intervention to a child who was going to undergo WADA test prior to epilepsy surgery. In this article, the work of HPS that offered to reduce the level of anxiety and pain through play intervention was reported. The child’s previous medical history and experiences were also reviewed.

- Wada Test

There are two hemispheres in the brain; the left and the right. The functions are very different from each other. In general, the left side is responsible for linguistic functions, including speech and understanding of written/spoken language. Such variety of linguistic functions are extensively spread throughout the left hemisphere. A drug to shut down functions is introduced into one of two hemispheres alternately. After a subject is given a series of language and memory related tests, including asking one’s name, address and birth date, the result is evaluated to measure which hemisphere retains language and memory functions.

It is significantly important to determine language lateralization prior to epilepsy surgery. During Wada test, a patient is introduced an intra-arterial catheter from the femoral artery while he/she is awake that can result in psychological distresses and pain to the patient.

II. Objectives and method

1. Intervention at the outpatient department

To understand the child’s physical and mental status, including his interest and surroundings, HPS develops a trusting relationship in cooperation with his family through play intervention. Also HPS provides procedure information on the medical examination by using a preparation booklet and makes sure to show the understanding of the child’s anxiety and whether he/she wishes to see the actual surgical room beforehand.

2. Conditions of pre-/post- examination

1) Prior to the examination:

We visited the child in his/her room after we received a confirmation of his/her admission from the ward. The child selected a type of play for the examination while reviewing the examination procedure in a preparation book and talking about his/her feelings to HPS. When we provided the child's status and music that he/she liked to staffs in the examination room, we were told when the room was vacant in order to take a tour with the child. Later we brought the child and looked around the actual examination room together. The child was observing the devices and lay on the bed. We decorated the examination room before we left.

2) During the examination

Prior to intravenous access and the introduction of an intra-arterial catheter, we explained the procedure once again and made sure to synchronize timing when the child felt ready and when the catheter was introduced into his/her body. In the past, there was a case that a child did not really understand the surgical procedure even though the child was provided with a preparation book beforehand. Accordingly, we prepared an operation chart (Appendix 1) that clearly explained about the thorough process of the examination. By checking the chart, the child was able to understand steps that he/she was taking and how he/she could cooperate. Finally the examination was begun with our play intervention.

3) Post-Examination

We praised the child for having taken the examination calmly. We listened to the child carefully regarding the examination while playing with him/her with a plastic board creation, slime and games that the child had chosen.

3. Working together with healthcare staff of other departments

Since various medical professionals, including physicians, nurses, a speech therapist and a clinical laboratory technician, are involved in Wada tests, we created a list of HPS roles on the examination day (Appendix 2) and tried to gain the understanding of our work from other medical professionals. The timing of intervention was discussed with other medical professionals and we received the child's medical status and other information beforehand. In order to build a trusting relationship earlier, we arranged to involve ourselves in the child's case from the very start of his/her admission. Information that we acquired through our work, including the child's status, requests and so on, were shared with other medical professionals.

III. Result

1. By using a preparation booklet, we received information on the child's level of understanding toward the examination and what he/she wished or did not wish to know. Eventually a proper setting and a condition for the child were provided. Since we were able to contact the child prior to his/her admission and introduced play intervention then, the child was mentally prepared and was able to imagine what to expect during his/her hospitalization. Having taken an observation tour to the actual examination room and having had a talk with nurses in the room, the child felt comfortable.

2. The HPS's intervention was clearly shown and explained to other healthcare professionals by the list of HPS roles that we made on the day of the examination. The operation chart created for the child to follow the whole procedure easily made the child undergo the examination without confusion and panic because it provided the child images of whole procedure and he/she was able to see what to expect during and the next of actual procedure.

3. During the earlier intervention prior to the admission, there was enough time for building a trusting relationship with the child and for collecting information by which the child was also mentally prepared for the examination in a positive manner. Additionally, having shared collected information with other healthcare professionals, everyone was able to work efficiently for the child.

IV. Discussion

Wada test is an important examination before epilepsy surgery. During the procedure, a patient remains awake and is monitored by numerous healthcare staff. Not to mention the pain the patient experiences while the catheter is being introduced into his/her body, tremendous anxiety and tension can be resulted from the procedure. In our case, however, the child overcame his/her anxiety and underwent the examination smoothly. It was considered because the child was well heard and respected and he/she was able to follow the entire procedure by a chart.

V. Conclusion

It was the first time HPS were involved in the procedure of Wada test. It was evident that to establish a trusting relationship as early as possible through continuous involvement with the child and his/her family was vital. At the same time, issues including support for children who have strong anxiety and the way to work with other departments efficiently still remain challenges of our field. We shall work towards our goal – to be the best supporters of children – with our understanding of their psychological distresses and simultaneously with our encouragement so that they face their medical procedures at peace and with confidence.

Appendix 1: Intervention of HPS, on the day of Wada test

➤ Before the test

Confirmation before the test (to the child and the family)

- Why are you here today?
- Is there anything you feel anxious about?
- To confirm whether the parents accompany. If so explain the procedure

*1) Regarding Play Preparation

Why play before the test

- In order to relax. To confirm a type of play between the interval during the test



➤ When entering the examination room

To promote a smooth procedure

- To encourage the child to respond when doctors and nurses address him.
- To decorate the examination room with the child. HPS may ask the attending nurse for the decoration.
- To provide necessary support for the family in a case where they accompany their child.



➤ During the test

Play during the test

- To provide ²⁾ “distractions” in order to divert the child’s attention from pain-associated treatments such as intravenous access the introduction of an intra-arterial catheter.
- While radiation is applied to the child, HPS leave the room.
- During the interval of the test, to provide some games (play) that the child previously chose in order to avoid him getting bored
- To support the child so that he/she can undergo the second half of the procedure smoothly

To parents

- To tell the family terms and behaviors necessary for the given situation



To praise the child for completing the procedure

- To praise for good work and cooperation. To ask doctors to provide some symbol of recognition to the child such as a medal or a card.
- HPS will take the child to his/her room.
- In a case where parents do not accompany during the test, HPS will provide them their child’s status

1) The objectives of Play Preparation are to alleviate children's anxieties and to provide solutions their questions regarding medical procedures through playing so that they can be mentally ready for the forthcoming treatment/test.

2) Distraction is a method to divert children's attention through playing from treatments and tests that may cause distresses.

* The contents of play preparation vary depending on a subject's age, level of development, the previous medical histories and so on.

HPS/Children's nurse

Kojima, Hatai, Oya

Appendix 2: What is Wada test? What do you do?

Sequence	What to do	Please cooperate with us on...
1	To enter the examination room	
2	Time for introduction	We will ask you some questions, including your name, birthdate and what kind of medical test you will take. Please answer those questions.
3	To lay on the bed To put monitors on your body	
4	To take off your underwear	Please lift your buttocks.
5	To measure blood pressure/ (insertion of an intravenous line)	It stings a bit, but the pain doesn't continue. So please hold out!
6	To apply antiseptic solution at the base of thigh	You may find it as a little cool touch.
7	To put a green sheet on your body	
8	After an injection of local anesthetic (a drug to numb the area), insert an catheter (a thin tube)	Initially it stings a little, but you won't feel pain after that. So please hold out and try not move.
9	The first test	Please play quiz with a speech therapist.
10	Play time	
11	The second test	Please play quiz again with a speech therapist
12	To remove the catheter	Your doctor will press your thigh a little in order to stop blood coming out. Hold out!

13	To put a board to your thigh	
14	To go back to your room	

