



*an eu curriculumM for
visual disabiliEs
RehabilitatOrs*



Case study documents SV6y

Cocchi E., Agrebbe S., Calabria F.

VERSION DETAILS

Version of the document	Version 1
Date of delivery	Apr 14 th 2023



CC BY-NC-SA 4.0



Co-funded by the
Erasmus+ Programme
of the European Union

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein

Table of Contents

MEDICAL HISTORY	3
FUNCTIONAL CLINICAL REPORT FORM.....	4
PROFESSIONAL OBSERVATIONS AND REPORTS.....	11
References.....	17

Instructions

The enclosed documents are intended to assist in the analysis of cases during a simulation of Multi-Disciplinary Team (MDT) discussions, focusing on the promotion of neuro-psychomotor development within the MDT. These documents are associated with Lesson Plan LO3-D-E-1 and aim to facilitate the sharing of professional reports among participating students. To streamline distribution, the functional clinical report layout has been condensed. Additionally, there are video resources included, which are listed on the final page of the document.

The simulation took place in November 2022.

MEDICAL HISTORY

S.V. gender F

Date of birth: 07/03/2017

ICD 10 Diagnosis Code

F70 Mild unspecific intellectual disabilities

H54 Visual impairment including blindness

Notes

Periopic sheaths infiltration in acute lymphoblastic leukaemia type B. Outcomes of intracranial hypertension. Psychomotor retardation. Partial blindness

FUNCTIONAL CLINICAL REPORT

FUNCTIONAL CLINICAL REPORT 2022

S.V. 6Y

Medical history and aspects

Third child of non-consanguineous parents. Denied any prior knowledge related to neuropsychiatric conditions. The fourth pregnancy (which followed a previous pregnancy that ended in a spontaneous abortion in the early weeks), progressed normally but ended in an induced labour at 39 weeks. The labour was eutocic. PN 3975, Apgar 9/9. There were no signs of perinatal distress reported and the baby immediately cried and showed good adjustment to extrauterine life. Breast feeding was successful with coordinated sucking and swallowing.

S.V. exhibited typical psychomotor development until the diagnosis of Acute Lymphoblastic Leukaemia (ALL) at 18 months. She was walking independently at 15 months and utilizing phonemes with semantic meaning at 11 months. However, she consistently had a poor appetite and food selectivity .

Acute lymphoblastic leukaemia type B was diagnosed in December 2018, as indicated by reports. Enlarged lymph nodes in the nuchal were detected at 18 months old, followed by fever and various symptoms such as petechiae and epistaxis. Leukaemia was identified through blood chemistry tests and treatment began at OU Haematology. The treatment protocol involved aggressive CT during hospitalization, followed by maintenance at home. In September 2020, the patient experienced headache and strong irritability, accompanied by psychomotor agitation crises. During the scheduled check-up in December 2020, an early recurrence of CNS LLA-B was detected, prompting the start of LEV therapy. An MRI revealed dilatation of the sheaths of the optic nerve, raised papillae, signs of intracranial hypertension, and chronic subdural hematomas from leukemic pachymeningitis. The left eye's optic disc had soft edges compared to the right eye.

S.V. underwent decompressive surgery to reduce the intracranial hypertension, which involved the in initial placement of a reservoir shunt. Upon awakening from the surgery, she experienced severe visual impairment which was most likely related to the intracranial hypertension. As a result, a subsequent surgery was performed to place a subhard-peritoneal catheter

S.V. was hospitalized until the end of July 2021 (patient received parenteral nutrition via a CVC from February to July). She often refused to eat and experienced frequent vomiting. A psychological intervention was started in July (DR. NNNNNNNN) along with a logopaedic intervention which consisted of three sessions that re-educated in touching and tasting food. Additionally, neuleptil therapy was started.

The patient was released from the hospital at the end of July and showed gradual improvement in their eating habits. Currently, after a period of severe food restriction, their appetite has returned, although it fluctuates, and meals often take a considerable amount of time. Low frustration tolerance continues to be a challenge. The parents have noticed neurological impairments resulting from the initial intervention, affecting motor skills and verbal expression. However, since being discharged, there has been progressive recovery of lost motor functions. In July, crawling was regained, followed by the restoration of independent walking. However, some motor skills difficulties persist, likely due to visual challenges as well.

With regards to S.V.'s linguistic skills, there is still difficulty in recalling vocabulary and a phonetic/ phonological impairment persists. In early April, she began attending kindergarten after previously only attending nursery school until 18 months (until onset of ALL). The school was able to arrange 8 hours of support from an educator.

The next check-up, scheduled for 09/05, will include an EEG to assess the possibility of discontinuing the antiepileptic treatment. The patient's condition of handicap and civil invalidity has been officially certified, leading to the receipt of a companion allowance.

1. RELATIONAL AND BEHAVIORAL ASPECTS

S.V. relates easily, is approachable and collaborative. She shows positive non-verbal cues such as smiling and maintaining good eye contact as well as being open to conversation. She generally separates calmly and with a smile from her mother who accompanies her to the rehabilitation centre. However, during the initial period of attendance or after prolonged absences, there were instances where separating from her mother was challenging and S.V. required the presence of her mother in the room. S.V. has developed positive relationships with her therapists and shows respect for rules during play sessions. She has also internalised the routine of the psychomotor setting.

Although she doesn't consistently seek assistance when in trouble, she has shown a greater willingness to seek support from adults in recent sessions

In the speech therapy context, she collaborates in the proposed activities, but as soon as she realises that she is working on the phonetic-phonological expressive level she shows relational closure (flexed head, poor eye contact, very low tone of voice, or muteness).

In the months following her return from vacation, S.V. displayed oppositional attitude towards activities that related to language, particularly those involving articulation. Her mother reported that this oppositional attitude also occurs at home (S.V. refuses to use a table and prefers to lie on the floor to draw). Similar behaviour was also noted at school, where S.V. would not accept drawing outside the margins and insisted on redoing the drawing or tearing up the worksheet if it happened.

2. NEUROPSYCHOLOGICAL AND COGNITIVE ASPECTS

S.V. demonstrates moderate attention during activities. She experiences challenges in correctly organizing logical and logical-temporal sequences and has difficulty with short-term memory. Her visuo-spatial skills are weak. However, she is able to identify and locate body parts on herself as well as on others. There has been improvement in her ability to rearrange logical and logical-temporal sequences, although she still faces some difficulties in flexibility, inhibition, and problem-solving tasks. Her short-term memory has improved, although there is still some room for growth. Her visuo-spatial skills are now considered satisfactory. While she has acquired the concept of right and left on herself, she has yet to fully grasp it in relation to others.

The evaluation tests conducted in March 2021 (Griffiths III, chronological age 60 months) revealed a delay in psychomotor development (QGS 61). Specifically, there was a decline in global motor skills (equivalent age 38 months), language/communication (equivalent age 44 months) and hand-eye coordination (equivalent age 46 months). It's important to consider S.V. visual impairment and speed of task execution when looking at the overall result as these impact her ability to learn new skills and performance on tests that require increased attention, visual perception and hand-eye coordination.

However, it is important to underline the commitment and consistency that the girl put into carrying out what was asked of her, never letting herself get discouraged even in the face of those trials that put her most in difficulty.

3.COMMUNICATION ASPECTS

S.V. prefers communication through the verbal channel and both verbal and non-verbal methods are effectively integrated.

4.LINGUISTIC ASPECT

S.V experiences difficulties at the phonetic-phonological level, which occasionally impacts the intelligibility of her speech. She is aware of these difficulties which emerged after her recent relapse, and she openly communicates about them with her parents and siblings at home. According to her mother, in the last few weeks there has been a notable decline in speech intelligibility during the late afternoon/ evening hours, likely related to fatigue.

Regarding the phonetic-phonological level, there has been noticeable progress in the automation and generalization of spontaneous speech in recent weeks. S. V's mother has also reported that she is starting to self- correct spontaneously in various contexts/situations.

Suggestions regarding activities have been shared with the school to support the effort/work we are making in the room.

Testing the semantic-lexical level is challenging due to S. V's visual difficulties. It makes it hard to determine whether she struggles with recognizing the different stimuli presented to her or if she is having difficulty with retrieving verbal labels.

Further investigation is required to assess the morpho-syntactic level of input, as the individual appears to exhibit certain difficulties primarily related to negative and adversative sentences.

The ability to rearrange logical and logical temporal sequences as well as verbalisation is improving. Although occasionally she requires support to maintain coherence in the prepositions produced.

5. MOTOR-PRACTICAL ASPECTS

The neurological examination reveals normal tone and trophism, as well as normal muscle strength. The presence of osteotendon reflexes (DTR) is slightly evident, particularly distal to the left. There is no elicited foot clonus. Bilateral Plantar skin reflex flexion is observed. The individual is able to stand upright while passing an object from one hand to the other, showing anticipation. The Romberg test yields negative results. In terms of autonomous walking, there is improvement in achieving a heel-to-toe or "flat" support, with slight varus and internal rotation of the feet, and a narrow base of support is maintained. The ability to walk on toes and heels has been regained. The individual can jump with feet together and maintain a monopodial position for 2-3 seconds. She is also capable of climbing over obstacles.

At the psychiatric visit there was an improvement in the muscle strength in dorsiflexion of the foot, and in the global strength of the AAll and of the core.

S.V approaches her therapists calmly while holding her hand out to them. She has shown more confidence in climbing stairs and obstacle courses. Walking at normal speed has also improved, although the toe-to-heel gait persists when accelerated.

Lateral-lateral balance has improved, although work still needs to be done on anterior-posterior balance. It is recommended to slightly slow down S.V. when she becomes familiar with a route to increase static times and prevent stumbling due to low vision.

Over time, there have been observed improvements in gross motor skills, although difficulties in static and dynamic balance persist due to her visual impairment. She can cross a beam safely but without toe-heel contact and still struggles with complex motor coordination

In practical terms, S.V. has acquired various skills through simple ideo-motor praxis, such as fitting, inserting, screwing, unscrewing, and tearing. Although she can cut and fold a sheet, her performance in this area is somewhat unpredictable. However, her conceptual skills are strong, and her constructive abilities are decent. The upper punch grip is present and effective, as she holds a writing instrument with the right hand using the appropriate amount of pressure. The quality of her graphic representation, including the depiction of the human figure, has shown positive development.

6. ASPECTS of the GAME

Choose a game that is both functional and symbolic, suitable for S. Vs age. S.V. enjoys pretend play activities such as cooking or playing doctor and has shown an interest in building games using LEGO Duplo. S.V. can take turns in board-structured games with a 1:1 ratio.

7. ASPECTS OF LEARNING

Work has begun aimed at strengthening the school prerequisites.

8. ASPECTS OF AUTONOMY

S.V can independently wash her hands in the bathroom as well as being able to put on and take off her socks and shoes.

9. SOCIO-RELATIONAL ASPECTS and the CONTEXT OF BELONGING

The family demonstrates a willingness and attentiveness to the needs of S.V. Recently, she has been enrolled in a school environment.

10. NEUROVISUAL FUNCTIONAL ASPECT

During environmental exploration, S.V. is now able to enter rooms without difficulty and navigate familiar environments independently. However, she often fails to take into account unforeseen obstacles due to the limitations of her residual vision in the right eye and the reduced field of vision, which hinders her ability to visually search for potential obstacles.

During sessions, exercises are mainly carried out on tables and the use of table and LED lights that are positioned on worksheets/games are essential. In order to facilitate eye-hand coordination, touch- PCs are used. Regarding paper- based activities, S.V. typically performs them at a distance of about 10 cm from the nose-sheet, depending on the content being presented. However, this proximity often results in a loss of overall perspective, therefore, finding the right distance is essential.

For colouring activities, S.V. uses felt-tip pens with large tips. The aim is to avoid low-contrast and overly bright colours, such as light yellow or white. Special pre-graphics cards are employed, which possess specific characteristics. These cards either exhibit strong black-and-white contrast or are highly visible. The cards are designed to minimise visual crowding by featuring only a few elements with minimal details, ensuring ease of comprehension. The size of the figures on the cards is appropriate for S.V.'s visual acuity. To accommodate the impairment of the left visual field and reduce the need for compensatory head movements during search tasks, the figures on the cards are primarily positioned on the right side.

Regarding ocular motility, there is an exotropia due to the non-use of the left eye (OS), and occasional nystagmus is observed. Versions, including pursuits, seem to be relatively within the normal range. The near point of convergence falls within acceptable limits, and eye-hand coordination is considered fair.

Regarding colour vision, the PV16 test was unable to be conducted, and the colour vision test revealed impairments. Both the PV16 and colour vision test were found to be challenging for S.V. However, when colours are presented in pairs or named, S.V. can recognise almost all of them. As for contrast sensitivity, further information is needed.

Tests outcome on March 2022

Right Eye: 1/30 Rossano 5 to 5 cm (c26)

Left Eye: hand-motion

OO: exotropia LE; fixing with RE

Note: there is a very compromised perimeter framework due to the papillary atrophy.

OO clear cornea, deep anterior chamber, normotrophic iris, normal pupils, clear lenses.

OO fundus: papillary subatrophy, normotrophic macula. outcomes of intracranial hypertension, infiltration of the perioptic sheaths

11. MOBILITY AND ORIENTATION ASSESSMENT

S.V. primarily relies on her visual sense for navigating in different environments and does not utilise a perimeter as a guide. In larger or unfamiliar spaces, as well as in the presence of lighting changes, shadows, or intense light, she experiences hesitations and may lose her references. In both school and rehabilitation settings, she relies on a classmate or therapist to navigate open spaces or to move between rooms that are familiar to her.

When guided, she is willing to use her other senses to explore and understand spatial representations, such as finding the upper right or lower left corner of a sheet or table. She demonstrates good tactile discrimination of various materials, textures, shapes, and sizes. She is also able to create temporal sequences in verbalisation and storytelling using tactile or multisensory books. This activity serves as preparation for sequentially and chronologically exploring spaces and verbalising related details, such as identifying the first object encountered or its location.

While S.V. has a solid understanding of body awareness, she exhibits some hesitations regarding laterality (left and right). Orientation and mobility training are recommended to enhance her ability to move fluidly and safely, and to improve her spatial management skills using techniques that involve using multiple senses.

OVERALL AND PERSPECTIVE

Verification of the objectives at the end of the enabling project:

Test name	Normative values	Results
Griffiths III (03/2022)	chronological age 60 months	equivalent age 47 months QGS 61
Sc. A Basis of learning		EE 55 months
Sc. B communication and language		EE 44 months
Sc. C hand eye coordination		EE 46 months
Sc. D emotional social staff		EE 57 months
Sc. E gross motor		EE 28 months

In consideration of what has been highlighted, S. will continue the multimodal rehabilitation intervention, in particular: neuropsychomotor, speech therapy and visual stimulation treatment, on a weekly basis; cycles of physiotherapy treatment will also be carried out.

Objectives achieved:

- Improved ability to sort logical and temporal-logical sequences
- Evolution of skills in graphic representation and representation of the human figure - safety in the execution of obstacle courses

Objectives partially achieved:

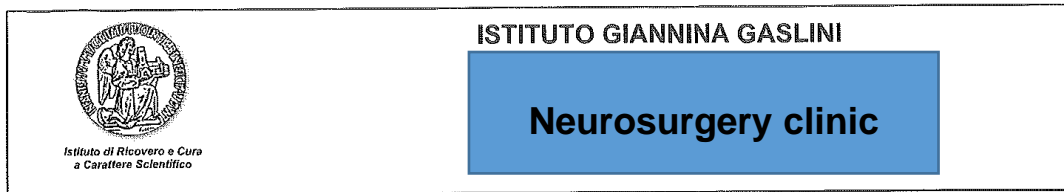
- Propose tasks of flexibility, inhibition and problem solving
- Support short-term memory
- Favor complex balance and motor coordination tasks
- Space management during walking

The team of the Outpatient Rehabilitation Centre

11/11/2022

PROFESSIONAL OBSERVATIONS AND REPORTS

Simulation defined at November 2022



Patient: S.V.

Cod.

Gender: F

Date of birth: 07/03/2017

Age: 5

Reason for access and therapy in progress: follow-up of HSCT haploidentical transplant 26/05/21, from the mother

Medical objective examination:

Brain MRI 16/08/22

CT scan brain 16/09/2022

Diagnostic and therapeutic conclusions: known patient undergoing HSCT for ALL with CNS involvement. Carrier of subduro-peritoneal shunting. Good general clinical conditions, on brain CT the thickness of the known subdural flaps remained unchanged, appearing slightly hyperdense in particular in the bilateral anterior frontal area. If stable neurological conditions no neurosurgical indications at the enrollment stage.

Brain CT checkup is recommended in 2 months.

Unchanged therapy, unless otherwise indicated by neuropsychiatric colleagues

Date: 16/09/2022

Signature

A handwritten signature in black ink, consisting of a stylized 'A' followed by a long horizontal stroke, is written over a dashed horizontal line.



Ophthalmological report
17/03/2022

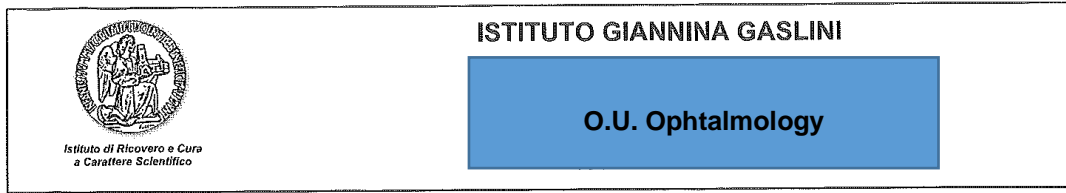
Surname, Name: V.....S.....
Date of birth: 7/03/2017

Fixation: right eye
Right E VISUS: 1/24 LH back illumination chart
Left E VISUS: uncertain hand movement
VISUS NEAR right e.: font 26 (icons)
anterior segment OO: within normal limits
Fundus OO: papillary pallor compatible with partial atrophy of the optic nerve

Evaluation: partial blindness (activate legal procedure)

The ophthalmologist

_____HHHHHH_____



Patient: S.V..

Cod.

Gender: F

Date of birth: 7/03/2017

Age: 5

Reason for access and therapy in progress:

Required exam: ophthalmology visual field

Requested by: ophthalmology clinic

request submission date : 16 Nov 2022

diagnostic question: control in a patient undergoing bone marrow transplantation

Performed visual field

Goldmann kinetic perimetry

examination performed in binocular (in nystagmus and monovision)

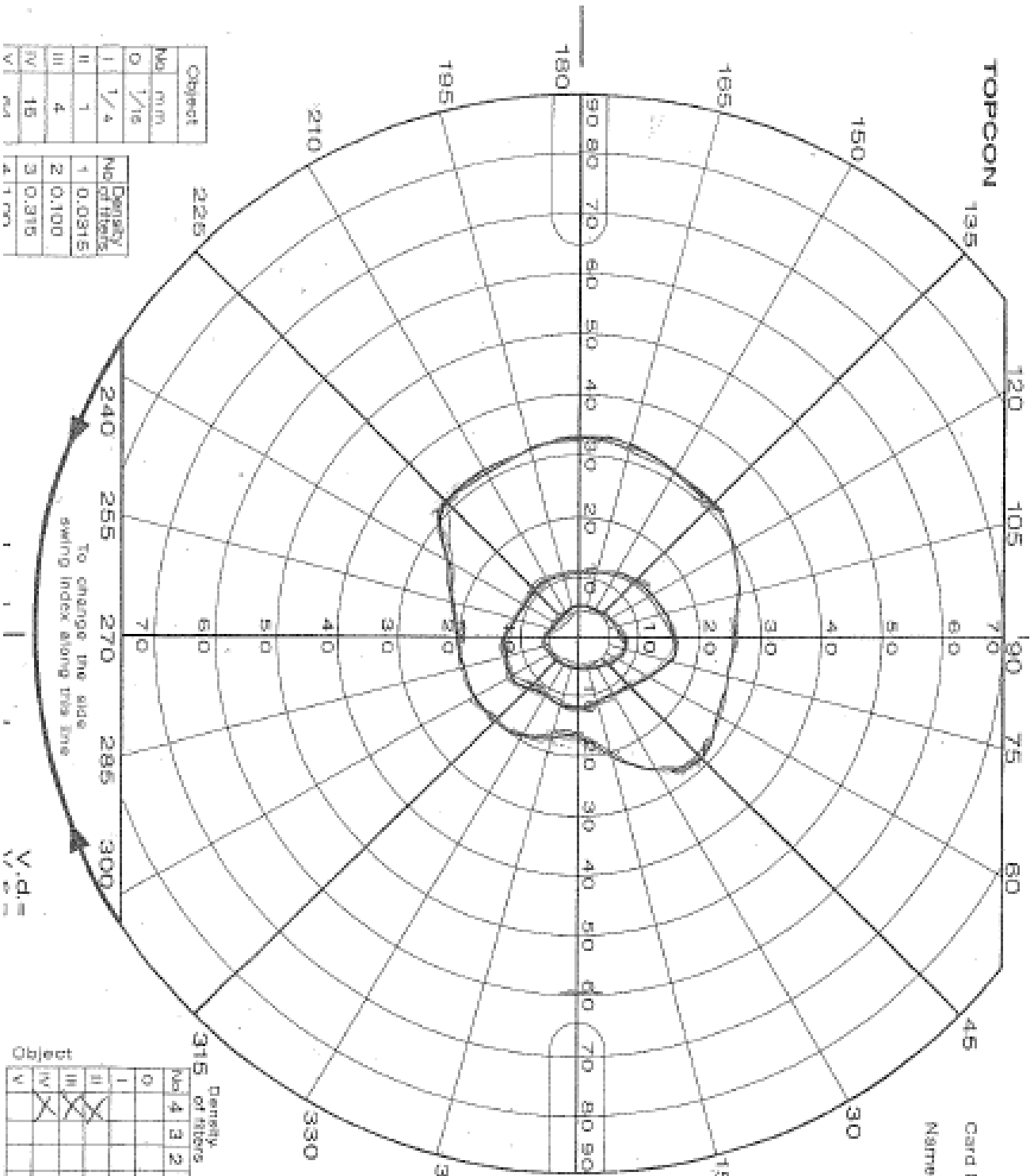
Concentric restriction of the visual field within the central 30 degrees on the horizontal and vertical axes

Date: 20/01/2023

Signature ____KKK_K_____

Object	No. (mm)	Density
I	1/4	1 0.0315
II	1	2 0.100
III	4	3 0.315
IV	15	4 1.00
V	60	

Object	No.	Density
I	4	2
II	3	2
III	2	1
IV		
V		



To change the side swing index along this line

V.D. =

Card No. _____ Age 5 1/2
 Name: [Signature]

Date: 20/01/2023

Diagnose: _____
 Diameter of pupil _____ mm

R. L.
[Signature]

ISTITUTO "GIANNINA CASLINI"
 GENOVA - QUARTO
 AMBULATORIO OCULISTICO E
 OTTOFONICO



Patient: S.V.

Cod.

Gender: F

Date of birth: 7/03/2017

Age: 4

Medical objective examination:

hypoglycemia, hypovolaemia

control of a 4-year-old girl with acute lymphoblastic leukemia recurrence, stem cell transplantation, pachymeningitis.

Minimal bilateral reduction of bihemispheric subdural flaps. She has been refusing food for months due to reported inappetence, nausea. A few tastes of liquids and creams have been reported in recent weeks. Recently made a request to be able to have a specific food at home. Doesn't agree to assume food during the visit.

in today's evaluation the child appears to be collaborative towards the proposed games, sight and relationship with the operator. Adequate speech, no drooling. Walking with a minimally widened base with instability in changes of direction, possible gait on the toes, not very good on the heels in particular on the left. Symmetrical selective motricity. Tone within bounds. Hypo-evokable osteotendon reflexes.

Constant request to be able to get up and move.

Speech therapy combined with the psychological one continues to promote food tolerance from a sensorial point of view, the pleasure towards the moment of the meal.

23/07/2021

Signature AAAAAAAAAAAAAA

ISTITUTO GIANNINA GASLINI - GENOVA QUARTO
U.O.C. OCULISTICA
Direttore: Dott. M. SERAFINO



Patient:	S. V.	DOB:	07-Mar-2017	Sex:	F
Patient ID:	---	Exam:	12-Jan-2021		
Diagnosis:	---	Comment:	---		

OD IR 30° [HS]



OS IR 30° [HS]



Notes:
Date: 03-May-21 Signature:

References

Video 1 6y change direction

Video 2 6y walk between cubes

Video 3 6y drawing body