

### INES, 10 MONTHS OLD BABY

Ines is a ten months young baby with underdeveloped motor skills for her age. She did not roll from back to stomach until the age of nine months and neither she creeps nor crawls. She had learned to keep the sitting position with her legs in a kind of a ring shape, but she cannot do any transition from this position. On her stomach she can't displace herself in any direction, and although she begins to lift her pelvis it's not a functionally organized movement and after a few moments she starts to complain and looking for help.

Her mother Andrea called me very preoccupied because of the delayed development of the child. Ines' three years older brother had an extraordinary fast motor development what generated a big contrast for his little sister. So the family was worried about Ines and Andrea started to take her to different tests which brought up that she had a certain level of hypotony, but not pathologically. The pediatricians still wanted to do some more tests to exclude other diseases. The whole situations of tests and examinations generated a lot of stress for Andrea. Nevertheless, she feels that actually her daughter is fine, only very slow and passive in everything she does. She told me on the phone that - in her opinion - it is due to the child's innate character and genetics.

**Making contact:** from the very first moment they come into my office, I make contact with the child with my eyes, face and voice. I also touch her hands and feet while she still is in the arms of her mother. I want her to get used to my presence and to create an atmosphere of gentleness and easiness while she is feeling completely safe in the arms and touch with her mother. She is both, interested and shy at once, what is completely normal at the age of ten months for the so called **stranger anxiety**.

This interesting phenomenon appears in babies with increasing freedom to move, especially when starting to creep. It is like a counter balance Nature creates to ensure the presence of a caregiver in the child's explorations of its limits. This is important to know when coming in contact with babies because the primary point is to gain their trust. Actually, to work with people, I always try to build up a relationship of confidence, which allows me to create later situations to explore with the person in the "unknown", but with babies it is indispensable because of the complete authenticity of their reaction. Babies at this age do not have sufficient capacity for self-regulation to manage unexpected situations. For this reason it is the care-taker who has to take the responsibility for this aspect of the exploration-process by being present and holding the child in the arms when necessary.

With Ines, I tried on one hand to waken up her curiosity with my playing offers, toys and movements, and on the second hand I tried to respond with precise empathy to her reactions and needs. This included in her case realizing the moments when she needed to feel the nearness to her mother and to take care of it. For Ines this need was very remarkable the first two days and changed radically in the third session. Further on I will come back to this interesting aspect of the work with this child.

To begin the lesson, Ines' mother puts her child sitting on my table with the legs in a kind of ring shape. I see that Ines can sustain herself in sitting but she seems hardly able to make any transition from this position. To check it, I put a toy in front of her on the table and she reaches out to touch it, but her shoulder girdle and arms get totally stiff in a reaction to avoid falling, and she has no option to go in any direction. I see that that she has no idea how to use her legs and pelvis to get some stability or lever mechanism. As there seems to be a lack of strength in her lower body, she has only her arms to balance herself in this position to avoid falling and she starts almost instantly to complain and looking at her mother for help.

Often hypotonic babies have too little muscle tone in some parts and too much in others due to the need of compensation. In order of this, one of the themes to work is to redistribute functionally the muscle tone in the whole body in a more harmonious way.

So my first approach is to focus on the functionality of legs and pelvis to look for a more harmonious muscle tone all over her system, and to see, if her nervous system would let go some tension in the shoulder girdle in consequence.

When I touch her legs I sense that they are completely flabby or – for moments - totally tense in a global reaction of extension in her whole body. It is clear for me that Ines doesn't know how to use her legs, so I decide to go through the basic movements of the motor development to give her nervous system the chance to "update" sensorial and functional information she couldn't get before.

With Ines lying on her back, I begin to lift her pelvis a bit and let it fall back, while accompanying the impact voicing game-like and having eye contact with her. She looks interested, so I repeat several times to give her a clear sense of her pelvis and skeleton. Then I press her heels gently to the ground and wait for a reaction. I want her to push and feel the force going through her whole skeleton and lifting up her pelvis. This is a creeping like motion on the back which is one of the first forms of horizontal displacements in the development and gives the nervous system an important sensorial image of the heels and skeleton. But Ines has very little impulse and not sufficient force to push her whole body. I decide to take the movement as one of my references to measure her learning process.

I continue exploring her ability to organize towards **flexion**. I start by giving her a feeling of her ankles, bending and flexing them, and then I do the same thing with her knees and hip joints pressing the femurs gently in flexion into the joints. Then I move her left foot towards her face rolling her a little bit to the right and left until she let go the extensor muscles in her back and it becomes possible to put her foot a little bit into her mouth, what is only possible with the ability to flex the whole body, especially in her hip joints. I explore the same movement with the other leg and then with both, what is available almost immediately. But all of a sudden I wonder why there is no reaction in her hands when approaching her face with the feet: It is as if she has no idea that she has hands. This would be a normal reaction that can be expected from every healthy baby with a few months.

So I touch her palms with my hands to waken up her proprioceptors and after that I tap her hand with her own foot saying to her: "*That's your foot touching your hand*". I repeat several times and after some instants the "older parts of her brain remember" this neurological pattern and suddenly there appears a reaction in her hand to reach out to her foot. I tell her that she does wonderful and she - in turn - reacts doing it again. We have a dialog. As the next step, I go systematically through some of the basic variations: foot to foot, feet to mouth, foot to hand in crossed and parallel on each side. Then I make a little "package" with both of her hands and feet holding with my hands on, and I start to roll her on her back from side to side. She is curious, looking at me and accepts joyfully the playing within these configurations. Through the whole process I hold the contact to her through my face and voice.

In the following, I roll her **onto the side**. One side is easy, but the other one is unknown for her. So I roll her onto this side and fix her upper foot on the table in front of her with the knee slightly bent. I want her to feel the effect of her forces through the whole skeleton if there is a clear reference point in her foot.

I have in my mind the *Bernstein*- idea of the different *degrees of freedom* that is an interesting aspect of the learning mechanisms in our nervous system. Nicolai Bernstein ("*Dexterity and its*

*Development*”) was a Russian scientific and pioneer in this area, who did a lot of fundamental research on human movement between 1910 and 1965. What he discovered has a lot of parallels to what Moshe found. For Bernstein, there are basically three phases in the learning of movement, which are: the blockage of the degrees of freedom, the giving up of the blockage and the appearance of reactive phenomena. I don’t want to go further into this subject within this context, but in my understanding, Moshé’s idea of *constraint* is an extension of the same issue. They both observed that our nervous system learns as a reaction to find a solution or new order to certain limitations. Feldenkrais figured out a brilliant way to produce situations through body-configurations that allow to evocate this kind of learning through the same phenomenon.

What I do with the foot is to give the baby a clear constraint to stimulate her nervous system to find movement-resources in the rest of her body which allow her afterwards to organize herself more comfortably while lying on her side as a preparation of the transition from back to stomach.

And she does. After a few moments, she accepts lying on the side and she is playing with a toy I gave her before. I go back to the same movement and continue to roll her a bit from side to side until it is easy, and then I go further and roll her **onto the stomach**. But her arm gets stuck under her body. I wait for her reaction because I want her to find a solution on her own, but she doesn’t know how to organize herself to do it. I can see that she is near to it, but she doesn’t find how to succeed. At the moment she wants to give up, I call her attention putting a noisy toy near her head and finally it’s her curiosity which gets her to find a way to free her arm in order to touch “that thing” near her head. She is visibly satisfied with her deed so we repeat the movement some more times. Then she wants to go to her mother. We make another pause with her mother taking care of her. Then I ask Andrea to put her again down on the stomach.

I take some moments to simply observe without doing anything. It turns out that lying on the stomach is not so easy for her and she has no idea what to do. I try to bend one of her legs sideways to her belly, but it is almost impossible because of her tendency to push with her arms to lift her head activating her extensors. She pushes with her arms with quite a force towards the floor, but it is not even enough to start creeping backwards, what is the option some infants find first. Her pelvis lifts a bit, but she can’t organize her legs and pelvis in a functional way. After a little while she starts to complain and looking for help to her mother. Then she starts to cry. I feel she is unsure, so I take her up and give her to her mother. I give her a moment to regulate herself and then I ask her if she wants to go on playing with me. But she is visibly tired and I decide to stop because I feel that it is enough for the child today.

After this lesson I gave Ines’ mother a Functional Integration. Her husband took care of Ines, so we could work without the responsibility as a mother in that moment. This was very important, because it allowed creating a difference in the mother’s process, what had an interesting effect on the work with Ines. I won’t describe the Functional Integration with the mother in this context, but to summarize, it was a lesson of using and playing with the elements and movements she saw me doing with her child. The interesting thing was that she apparently used the lesson to let go a lot of underlying stress. I basically worked to facilitate flexion because of her tendency to arm herself through overuse of the extensors. At the end, we did some global rolling movements on the floor what had a deep effect of well being and ease on her. She felt very refreshed and lighter afterwards.

The next day, I noticed that Ines needed a lot of breaks and I had to take her to her mother a lot of times. I thought this was due to the bad night the whole “family system” had, but also to the changes in her nervous system and I accepted it as a part of her needs to respect in this process. I wanted her to feel sure above all.

I start attracting her attention with my face, voice and showing her different movement patterns with my tongue. I need more time than the day before to get her attention, but I insist because I know that babies tending to hypotony need more time and a lot of repetitions to get the patterns. After a few minutes, she becomes really interested in the movements I show her with my tongue and mouth. These motions are basically sticking out my tongue and passing it slowly over my upper lip. This is part of an archetypical diagram that even a newborn can recognize. After a few moments there is a slight reaction in her mouth and I can see her nervous system “mirroring” what she is seeing with her eyes.

This reaction of mirroring movements is a very interesting phenomenon science has recently discovered. The Italian scientific G. Rizzolatti was the first to prove with chimpanzees, that there is a neuronal network in the brain where the nervous cells are able to mirror what is seen through the eyes (*mirror neurons*). This is the neurobiological explanation for empathy and an important base for what is called the “cycles of interaction” between child and mother (Papoušek /Stern).

Another motivation to work with this issue is the fact, that up from the age of six months the development of the motor skills of the mouth starts and it has called my attention that Ines has been so quiet up to now. She had almost no idea that she could use her mouth in different ways and she had very little movement in her lips. This also changed in a noticeable manner the third day.

Once I got her attention, I continue by going through some of the movements of rolling from side to side and onto her stomach, we did the day before. I want to give Ines the chance to familiarize with these new configurations and sensations. The movements are much more available than the day before and there is almost no resistance in her. So I put her on the stomach to continue and she responds contracting the muscles of her back what lifts up her head and pelvis. I give her a toy to occupy her attention and keep her in the position for a while. I try again to bend one knee towards her belly thinking in the possibility to prepare or evoke some initiation of creeping by flexing the hip joints. But she stiffens her upper body too much, what doesn't allow her spine to rotate, so I go back to roll her on her back for some instants. Then I try again, but it's still difficult and she shows some saturation, so I take her back to her mother to give her a break. I decide to change my strategy. After some moments she looks at me with a quiet curiosity and I decide to try to continue in the **sitting** position.

Working in sitting is important for her because she is used to, and also, at the age of ten months, her nervous system is still maturing the righting mechanisms in the vertical positions. Nevertheless it was indispensable to work simultaneously on the basic elements and functions of earlier states – like rolling and creeping on back and stomach - to improve her moving quality through differentiations and enriching her self-image. It was also a preparation for the **transitions between lying and sitting**, what was the next function I focused on.

I sit behind her and push her gently to fall backwards onto my lap. She turns her head astonished, looks at me: I smile and encourage her to come back to sitting. I help her a little bit with the direction, but she does most of the “muscular work”. My idea is to create more control of the muscle tone in her trunk through this **falling-movements** and the way back to sitting. If she knows how to fall she can sit much more freely.

After a few movements her astonishment turns into pleasure and she starts to enjoy the game and I reduce my help to get her back to sitting more and more. After a dozen of movements her way to sit is better organized, and I start to explore the **sidesitting** position. One side is quiet easy, but the other side is not known to her, a similar situation as before lying on the side. So I prepare the change of sides by supporting her pelvis

movement and spine to flex, and in the following I take her legs to the other side and wait for her to accept the new configuration which she does after some instants. Right away I show the mother how to change Ines' legs at home in playing situations because it is something that is very useful to practice to support the learning of this function. I propose her to catch her daughter's attention with some toy to change her legs on the other side and to wait for her to accept the configuration. After that I stop the lesson with Ines because she starts to show some tiredness.

The sidesitting position is important preparation in the hip joints and whole spine and important for different functions like transitions to kneeling, lying, crawling and later standing and walking. It is also important as a variation of the sitting position itself by providing a wide base of support during upper extremity play.

I continue work with the mother in a second Functional Integration. I really think of the integration of the mother as a systemic need of the work with Ines. Andrea tells me in the beginning, that she has a little bit of pain in the hip joint what for me means a good "pretext" to work with a similar functional idea. As the day before, I try to use most of the elements I employed with the baby an hour before. For her I chose the approach "from the other side", what means to work on the transition from lying on the stomach to sitting. I do this basically by bending one leg after the other and to go backwards with the pelvis until sitting on the heels.

Andrea felt she had easier hip joints after the session, but what was more important for me was that she could have an idea of the process her baby was facing, to create in her a new feeling of nearness and awareness of what was the babies' learning process about.

Working with the mother had a strong influence in the baby's development. Moshé writes in "The Potent Self" :*"the environment is a part of our functioning that cannot be separated from the individual" (...)* to change, we must change the environment so that the symptom is not sustained or learn a new response to the existing stimuli (...). For babies, the most important aspect of the environment is the mother who provides the necessary security to free the innate capacity and curiosity to explore and learn. It's a proven fact that children do not explore if they don't feel safe (John Bowlby: the Bounding Theory). So it was very interesting to see how the work with the baby changed after every session with her mother.

I would like to clarify that Ines' mother is a wonderful mother with good instincts and a very lovely way to act with her children. But she was very preoccupied, what – in my opinion - is perfectly understandable. She had a lot of stress because of her sensation of *"I don't know if something is wrong"* and she didn't find any reliable professional support and – to her feelings - too little understanding in her personal environment to deal with the situation. She actually felt she was on her own and almost helpless in a very uncertain situation, what is in fact an "ideal" condition for stress (J. Bauer). Moreover she had overcome a cancer eight years ago with one year of chemotherapy and it seemed that "the tonsils in her limbic System" associated the situation with her own history what meant for her: *"everybody says everything is fine, but at the end it is the worst outcome possible"* (in her words).

It seems that she found a possibility in both Functional Integrations to let go a lot of tension and stress. My way to work with her was basically looking for how to give her human support to reorganize herself. I think also that it helped her to acknowledge that her daughter was really changing through our work, what settled her and helped her to become calmer.

This opened up a new learning space for Ines the third day: she was much more able to stay with me playing and exploring movements without that much need to go back to her mother to reassure her safety.

**The third day** I noticed a clear change in use of her voice: She was babbling continuously, expressing more inner balance, activity and curiosity. She also used her voice as a tool to communicate with me continuously through the whole lesson. Her mother expressed several times her surprise to see her child “talking” so much.

We go again through a lot of variations of pushing from her feet through her whole skeleton, on her back, side and stomach. So she can experience what happens when she supports her movements from her legs and feet. This gives her a better muscle tone in her lower limbs and she after awhile she moves more in tune with the whole of herself. In the position on the stomach, I try to introduce an idea of creeping which is still not so easy because of her tendency to stiffen her arms and shoulder girdle. But there are a few movements with a good quality, probably enough for her nervous system to have the information of the pattern.

When we started the first day, I thought it could be possible to get her to creeping, but it was not possible. There were too many basic elements that she didn't learn and we had to go back to every milestone of the motor development to work on.

To continue, I put her in a sidesitting position and a toy on the table in front of her, like the very first day. I choose sidesitting and not in her habitual ring position because I want to see if today she can find a way to lift herself over the hip joint and femur and come to her stomach. I chose the easier side for her.

She looks at the toy, then she looks at me and immediately to her mother. Finally she decides to reach out to touch it. She reaches forward by supporting herself immediately with both hands to avoid falling and she starts to lift her pelvis, what she didn't the days before. But she gets stuck at a certain level and she begins to make some rocking-like movements with her pelvis, what means going backward and forward in a rhythmical manner.

This kind of **rocking movement** is a phenomenon on which the recently passed away psychologist Esther Thelen did some very interesting research. She investigated the process of creation of self-organizing patterns of behavior based on the theory of dynamic systems. She classified over forty different rhythmical movements in the early motor development, which appear in the chaotic transition from one pattern to the following level of organization.

So I know that the rocking movement is a characteristic state of transition, but Ines is locked in the intent. She needs something else to find her own way through this transition. In order to give her a hint I don't push her forward, but I give her a constraint, which is impeding her to go back sustaining her pelvis gently but firmly with my hand, without impeding the rocking. So she stays with the pelvis in the air and looking for a way to come out, sensing the levers in her hip joints and looking for the exact angle to go through, making slight variations within the rocking. After a minute she finds the direction and she comes onto her stomach. She takes the toy with evident satisfaction in her face and voice.

We repeat three times and I use these motions to show her mother how little help is needed - in fact I hold her with my index finger only - and that her daughter really does the rest of the movement. Andrea is very surprised and I encourage her to try it. When she does it, guided a little bit by my hands, she can clearly sense that Ines is almost capable to do it by herself. She is astonished of her own daughter. I explain her how important transitions are for her baby and that she can facilitate it a bit as a kind of homework.

Then I open a pure space of observation to see what Ines does and to show the mother how her child is able to process and integrate very fast the things we do. I did this

several times over the three lessons with the intention to give Andrea systematically the possibility to acknowledge the intelligence of her child and to find more and more trust in the competency of her baby.

#### **More Homework**

Andrea comments that people of her environment had started to “exercise walking with Ines”. I get really alert and explain her how important it is to give Ines enough time to prepare this as well as possible. I tell her: *“Ines will walk, I promise, she will do it for the rest of her life, but at this point of her development it’s very important for her, not to receive this kind of support from her environment. To find it in her own time is one of the bases for her self-image and self-esteem.”* Andrea understands this issue perfectly.

I also practice with Andrea to lie her baby down on the side instead of sitting, so she has the choice to go on her back or on her stomach and Ines has to face the transitions again and again. This is basic and has to be easy for her. I also tell her to not support the vertical positions, instead to stimulate all forms of horizontal displacements with toys and other invitations.

The “Handling” of the baby is a strong influence on the early motor development and it’s very useful to be considered when working with infants.

At the end I go back to check her process with the reference movement I chose the first day: She lies on her back and I press her heels again gently to the ground and wait for a reaction. Her push is much more powerful than two days before: her pelvis lifts quite high and she slides upwards with her whole body, kind of back-creeping motion. She does three or four movements in a row with visible joy in her little face. We play a bit with this movement before ending the lesson.

To bring the work with Ines to a close, I ask the mother to make a little resume of what was important for her in these three days. She tells me that she feels shocked to see how much development is possible in three days and she feels also that she had lost a lot of precious time for her child. I tell her, just to wait and see the evolution of Ines the next weeks. I suggest: *“Sometimes babies need a little help to find their path in the process and then they go on without any help.”* So we agree to wait and give Ines time.

#### **FEEDBACK**

When Ines was back home, people of her direct environment noticed important changes:

**Her mother** called me after some days and told me, what she observed: *“In general Ines is more harmonious and freer in her movements. My impression is that Ines’ intention and her way of acting are much more congruent; before the desire seemed to be one issue and a different one the way the body chose to realize it. She is also more pleased with everything, which is understandable for me, because things are easier if the body does what is intended. Ines enjoys a lot her movements like rolling from back to stomach and vice versa and she also turns several times without stopping.”*

**Grandparents:** In the eyes of her grandpas she was another baby: until the week before she has been extremely passive and after these three days she became active, more awake and more eager than before.

**Her father** told me that the first morning after coming back home, he put her on the floor, as he uses to do, and normally Ines got “bored” after 15 seconds (father’s words). But this time she was 20 minutes (!) occupying herself with movement explorations. She has passed from 15 seconds to 20 minutes for the simple hint she received of how to use herself. For me this is a wonderful proof of the vitality and learning instinct of the human nervous system.

Ten days later Ines started to creep, after seven weeks to crawl and two months later she started to stand up without any further help.

Her mother wrote me a mail: *“it is possible that for you this kind of spectacular change is something usual, but for us it is like a miracle.”*

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All photos of Ines are taken from a video her mother filmed some weeks after the lessons.