

# The perception of the fetus in mothers with liver transplantation. Brief communication

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## Abstract

**Background.** In this brief note we present the preliminary findings of a study of 16 women who underwent liver transplants before becoming pregnant and giving birth. The aim of the study was to show the similarities and differences between ways women experience the transplanted organ (liver) and the fetus.

**Methods.** To explore bodily experiences, a semi-structured *ad hoc* interview was done on a sample of 16 transplanted women who had completed a pregnancy. The interview was designed to explore the possible similarities between their perception of the transplanted organ (liver) and of the fetus.

**Results.** The main findings that emerge from our study are the following: a) in the post-transplant, pre-pregnancy phase, these women develop a polarized attention on the transplanted organ; b) during pregnancy this attention shifts towards the fetus; c) after childbirth the hyper-attention on the transplanted organ disappears and the subject resumes a normal relationship with her body.

**Conclusions.** Therefore, pregnancy and childbirth are experiences that can normalize relations between a person who has undergone a transplant and their transplanted organ.

## Key words

- liver transplantation
- pregnancy
- childbirth
- bodily experience

## INTRODUCTION

This article presents the preliminary findings of a study carried on 16 women who underwent liver transplants before becoming pregnant and giving birth. The aim of the study was to identify similarities and differences in the ways women experience the transplanted organ (liver) and the fetus. The ultimate objective of this research is the prevention and treatment of psychological and psychopathological problems related to pregnancy in female transplant recipients in the framework of a holistic approach, where the physician treats a *person* with liver disease, rather than just a transplanted liver [1]. Holistic medicine is a kind of person-centered, rather than disease centered, approach whose aim is optimal health and wellness [2].

It was found that one experience was common to all the interviewed women: before pregnancy the transplanted organ was the focus of their attention, but as the fetus developed, the attention previously directed at the liver shifted towards the fetus. The principle findings

that emerge from our study are the following: a) in the post-transplant, pre-pregnancy phase, these women develop a polarized attention on the transplanted organ; b) during pregnancy this attention shifts towards the fetus; c) after childbirth the hyper-attention on the transplanted organ disappears and the subject resumes a normal relationship with her body. Therefore, pregnancy and childbirth are experiences that can normalize relations between a person who has undergone a transplant and their transplanted organ.

## MATERIALS AND METHODS

To explore bodily experiences, a semi-structured *ad hoc* interview was conducted on a sample of 16 transplanted woman who had completed a pregnancy. The interview was designed to explore the possible similarities between their perception of the transplanted organ (liver) and of the fetus.

To better compare and analyze the results we used two control samples: the first is made up of women who

**Table 1**  
Semi-structured interview on the perception of the fetus and liver

Do you feel the liver/fetus?
Do you feel it where it should be or is it in some other place?
Do you feel any movement inside of the liver/fetus?
Do you feel the liver/fetus moving inside of your body?
Do you ever visualize your liver/fetus?
Do you ever think about your liver/fetus?
Do you feel that your liver/fetus is in harmony with the rest of your body?
Does your liver/fetus feel like a foreign body to you?
What texture does it have? (soft, hard, etc.)
Do you ever think that other see or perceive the liver/fetus in any way?
Did your feelings about the liver/fetus change after you saw it in the ultrasound? How did they change? Are you more aware of its presence? Do you think about it more? Do you visualize it more?
What is the main emotion that you associate with the presence of liver/fetus? (Anxiety, Fear, Anger, Disgust, tenderness, happiness).
Is it ever a cause of annoyance?
Is it ever a cause of pain?
Do you ever feel indifferent towards it?

Note: All of these questions were asked first about the fetus and then about the liver.

have undergone a liver transplant but have not had a pregnancy, the other women who have never undergone a transplant but have experienced the pregnancy (Table 1).

## RESULTS

Table 2 reports the exact comments of the women interviewed. The comments regard our interviewees' perception of their liver and of their fetus. These comments highlight the differences between women who undergo transplant but do not undergo pregnancy, women who give birth after transplantation and women who experience pregnancy without having undergone a transplant.

### *Perception of the transplanted organ prior to pregnancy*

The following comments made by women who had undergone liver transplantation are emblematic of what

we have called "polarized attention on the transplanted organ". They show a "tension" towards the organ that underlies all of the speakers positive and negative thoughts and feelings about it. The comments denote an unrestrained and explicit awareness of the presence of the transplanted organ.

*"Even now, after eight years, I stop to think and I feel that (the liver) is not really part of my body".*

*"I do not know how to explain it, it's hard! But even when you feel better if you try not to think about it, all of a sudden you realize that it is a kind of obsession!"*

*"I have been transplanted for 10 years now and the liver was always in my thoughts, I felt it, it bothered me, I felt like that was where I should not feel it".*

*"I felt something like an inner "flicker" where there was just the liver even though I knew it was not possible that the liver itself could be the cause those feelings".*

**Table 2**

This table highlights the differences between women who undergo transplant but do not undergo pregnancy, women who give birth after transplantation and women who experience pregnancy without having undergone a transplant

Women transplanted, no pregnancy	"You feel as if you have something inside you, that is not yours but it is vital for you. You naturally protect it, because it's as if I feel it, as if I had the ability to know where it is and also the discomfort, almost pain". "It's always in your thoughts, you are afraid to hurt it as if it were something different from the rest of the body, something to protect".
Women transplanted, during pregnancy	"When I knew I was pregnant the excitement was great. You still think about the liver, but when you know it's alright, the priority becomes the child". "No, as soon I knew about my son, I put these things in the background, I no longer thought about the fact that I had a stranger's liver as much as I did before. It was as if it were my own". "Yes, I feel him very much, somehow I always felt him, right from the start". "My friends told me it was still too early but I felt the presence of the fetus as early as the third month of pregnancy".
Women transplanted, after pregnancy	"Now, my attention, my thoughts have turned to my child, it is as if I didn't have the time or need to think about the fact that I have a liver transplanted". "In the first period, at the beginning, I thought continually about the liver transplant, I had almost a physical relationship with it, we talked ... Now, after pregnancy less, only sometimes".
Pregnant women without transplant	"I started to feel the fetus moving around the VI/V month. It was a nice feeling and amazing". "Around the seventh month I felt him kicking, especially when I sat down". "It was exciting to hear him move for the first time, you do not expect it".

### **Perception of the fetus in women with liver transplantation**

Women with liver transplantation have a more intense perception of the fetus. The following remarks of one of the women interviewed illustrates this point:

Do you ever happen to feel the fetus? *“Yes, I’m intensely aware of him, somehow I always felt it, right from the start”.*

When did you first feel him? *“My friends told me it was still too early but I already felt the presence of the fetus at the third month of pregnancy”.*

Do you feel the fetus in certain place in your body? *“Yes, sometimes I feel it is here (points to the right) because it feels harder and deformed, kicks, moves ...”.*

### **Similarities between the perception of the liver and fetus**

A series of questions were aimed at exploring possible similarities between the experience of the transplanted organ and the experience of the fetus. Both the transplanted organ and the fetus are in some ways, “foreign bodies” in relation to the schema and the usual bodily experience. A similarity can be seen between the proprioceptive sensitivity towards the transplanted organ and towards the fetus. As a rule, the organs of our body are not explicitly perceived, unless they are invested by some abnormal process that generates, for example, sensations of pain. In the case of organ transplants, an organ itself can be perceived as a “body in the body”. Not necessarily as a foreign body, but as an explicit presence of something that usually remains implicit and in the background. The transplanted women interviewed made the following comments about their perception of the liver.

Do you perceive the liver in any particular way? *“Yes, a little. I feel a sort of a pain, or discomfort, I don’t know what to call it ... right here where the liver is even though the doctors told me that the liver does not hurt”.*

Do you feel that the fetus is in harmony with your body? *“At first I felt as if was pushing on my intestines – I felt this after the transplantation too – I had these problems. Now it’s better ... however I don’t feel that he has harmonized with my body”.*

None of the women, however, compared her experience of the transplanted organ with that of the fetus.

### **Slippage of the polarized attention from the liver to the fetus**

As we have seen, in transplanted women, the liver’s presence is perceived as explicit, as a “body in the her own body”. Following liver transplantation there is a polarization of attention on the new organ. The transplanted liver is no longer just implicitly present in the body, but appears, instead, in the foreground and is perceived as a separate part. Among our respondents, the transplanted liver is first imbued with this “implicit presence transformed into explicit presence”, then with pregnancy this feeling is imbued in fetus. The fetus almost completely removes the transplanted liver from the foreground of the respondents’ perception. The following are typical answers:

- When you think about your pregnancy what is the main emotion you associate with the presence of your

transplanted liver? *“When I knew I was pregnant the excitement was great. You still think about the liver, but when you know it’s alright, the priority becomes the child”.*

- Did this happen more after the transplantation, during the pregnancy or is it happening more now? *“During pregnancy, no, I didn’t think about liver problems, I did the test, I made sure that everything was fine and I thought of the child”.*

- After the transplant did you think about the liver? *“Yes, always. But now I think more than anything else about my donor I’m no longer as worried as I was before about the liver itself”.*

- Did you think about the liver during your pregnancy? *No, not during pregnancy”.*

- Have you ever felt a movement inside the liver? *“During pregnancy, no, but at first I felt something like a “flicker”, but during pregnancy, no”.*

- Do you think about your liver? *“I just thought about the baby, and even now the important thing is that things are going well”.*

- During pregnancy, did you happen to feel the liver? *“The liver was always in my thoughts, I felt it, and it bothered me, I felt like it wasn’t were it was supposed to be, but during pregnancy I thought only of the child”.*

- Thinking about your pregnancy what is the main emotion you associate with the presence of the liver? *“It never had any connection with pregnancy, I never associated ... it was as if the pregnancy had taken over my imagination”.*

- During pregnancy did the liver feel like a foreign body? *“No, I say no because I thought more than anything else about the fetus, the liver was in my thoughts too, but not 100% as before”.*

- During your pregnancy did you visualize your liver? *“No, as soon as I knew about my son, I put these things in the background, I no longer thought of the fact that I had a stranger’s liver as I had done before, it was as if it were my own”.*

- Would it be correct then to say that you didn’t think about the liver? *“Yes, I didn’t think about it as much, I didn’t worry about hurting it, I didn’t worry about doing something, making some movement that could compromise it. After I got pregnant these thoughts passed out of my mind, I just thought about the baby and tried to protect him”.*

*“When I found out I was pregnant the excitement was great and you think about the liver when you did the exams, but if you know it’s alright, the priority becomes the child”.*

*“I thought about the liver very often, practically every day, but during pregnancy I was just hoping that everything was fine, that there were no complications”.*

*“After transplantation I thought a lot about the liver, but to tell the truth during pregnancy this didn’t happen very often”.*

*“Now, after giving birth, every now and then, I still think of the liver, but much less than before. At first, I thought about it and always felt that it was not really part of my body”.*

### **Normalization of the polarized attention**

The following statements suggest that after the birth of the child the polarized attention, rather than shifting back towards the liver, seems to normalize:

*“In the first period, at the beginning, I thought con-*

tinually about the transplanted liver, I had almost a physical relationship with it, we talked ... Now, after pregnancy less, only sometimes”.

“I wanted this baby so much, during pregnancy I have been very concerned, the only thoughts were turned to the baby and I did not think much about the liver. Now I think about it every now and then but in a different way, I think my experience and luck that I had, first for the chance of the transplant and then for the possibility of having a baby”.

“Now, my attention, my thoughts have turned to my child, it is as if I didn't have the time or need to think about the fact that I have a liver transplanted”.

## CONCLUSIONS

In previous studies, we have tried to highlight the complexity of pregnancy and motherhood as a kind of existential situation that can deeply challenge the psychological equilibrium of a woman, her sense of self and identity, and contribute to determining the development of psychopathological decompositions in vulnerable subjects [3-6].

The majority of papers on the psychological conditions of transplanted people mainly provide information on the quality of life before and after transplantation [7-11] or about the presence of anxiety and depression [8, 9, 12, 13]. In one study that focus on the mental representation of new organ [14], the authors report that the lack or incomplete intrapsychic integration of the transplanted organ involves a difficult physical integration

of the organ itself. In other words, people who complain of organic disorders related to the transplanted organ are those who show difficulties in mentally integrating the transplanted part.

In this study, we highlight the power of the experience of pregnancy and motherhood as the vehicle a more functional equilibrium. This is the case with women who have experienced motherhood after receiving a liver transplantation. Whereas before pregnancy the transplanted organ is the focus of abnormal and disturbing attention for female transplant recipients, during pregnancy the fetus received the majority of the mothers' attentions, fantasies and concerns related to their body, displacing the transplanted liver from its previous position of centrality. After giving birth, the liver does not come back to take the central role previously occupied. The experience of motherhood, therefore, may represent an opportunity to establish a new equilibrium with one's body that is more balanced when compared to the person's relationship with their body immediately after a liver transplant.

## Conflict of interest statement

There are no potential conflicts of interest or any financial or personal relationships with other people or organizations that could inappropriately bias conduct and findings of this study.

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