

# She aborted her child to save her brother's life. A paradigmatic case of medical and ethical manipulation

*Can bone marrow really not be obtained from a pregnant woman? Because if it can, there would be no medical reason to have to resort to abortion.*

Yang Li's brother urgently needed a bone marrow transplant to treat his disease. Yang Li, who was 12 weeks pregnant, was an immunologically compatible match, but doctors warned her that donating bone marrow for the transplant could endanger her pregnancy, leaving her with a difficult choice: continue her pregnancy and the transplant would not be performed, or abort to perform it. According to British tabloid [The Daily Mail](#), Li decided to abort her baby to be able to donate her bone marrow to her brother. Doctors will perform the procedure when the 24 year old recovers from her abortion.

The case has opened a medical and ethical debate in the media and social networks. Some see Yang Li as a heroine, while others believe that she should not have had an abortion.

The question that we ask and that must be answered is: Can bone marrow really not be obtained from a pregnant woman? Because if it can, there would be no medical reason to have to resort to abortion.

## CLINICAL APPROACH

To answer this question, we at the Bioethics Observatory asked a specialist, **Javier de la Rubia**, head of the haematology department at La Fe University Hospital in Valencia (Spain) and professor of haematology at UCV to assess the case. His clinical response was as follows. [Haematopoietic stem cells for allogeneic transplant](#) can be obtained in different ways:

1. If bone marrow is used, the procedure is carried out in theatre under general anaesthesia by repeated puncture-aspiration in both posterior-superior iliac crests, and usually lasts about 90 minutes. Therefore, from a technical point of view, the risks for a pregnant woman are no different to those when a patient has to be anaesthetised for any other reason. It is true that because the characteristics of the technique normally require the patient to be in prone decubitus position, it may be more difficult to obtain the stem cells if the abdomen is very large and it is difficult to turn the patient around.
2. In any case, today, allogeneic transplant is most often performed by collecting stem cells from peripheral blood. This is an outpatient procedure that can be performed in pregnant women with no particular problems. The main limitation in using this technique to collect stem cells is that it needs previous administration of granulocyte colony-stimulating factor (G-CSF) in the donor and experience with G-CSF in pregnancy is limited, especially if used during the first trimester; nevertheless, there are some published cases of its use in pregnancy with no complications for either the mother or the foetus.
3. If allogeneic transplant is considered an essential procedure for the patient, another equally valid alternative is to obtain stem cells (from blood or bone marrow) from an identical non-family donor. In this case, the stem cells come from an unrelated person, preferably HLA-identical. At present, with the refinement of HLA studies, donors can be found with matching of 10 out of 10 loci, and the risk of post-transplant complications is no higher than for a transplant from an HLA-identical sibling. Moreover, it is a procedure with which there is a lot of experience, since it is increasingly used in Europe, the USA and Japan, given the large number of families who have only one child and therefore lack HLA-identical family donors.
4. Other alternatives for performing allogeneic transplant without using a pregnant donor would be transplant of stem cells from an umbilical cord bank, although this type of transplant can be associated with more complications and should be carried out in an experienced centre. Finally, the use of "haploidentical" donors, i.e. with an identical genetic composition between donor and recipient in 50% of the HLA loci is also a valid alternative. These are transplants where peripheral blood stem cells are normally used, choosing the patient's parents or siblings as donors; as in cord transplant, it is a procedure that is increasingly used due to the aforementioned problem of the limited number of siblings in most families in the western world.
5. As we can see from Dr De la Rubia's response, there were several alternatives to resolve the case of Li's brother, among them, allogeneic transplant (using bone marrow from a person other than the patient),

which offers similar possibilities for cure, so it would not have been necessary to resort to using the pregnant woman as a bone marrow donor.

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