# LYMPHOMA DURING PREGNANCY WITH LIVE FETUS: CASE REPORT

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## **ABSTRACT**

Lymphomas are neoplasms of the immune system originating from B, T or Natural Killer cells that lead tumor masses. They can be classified as Hodgkin and Non-Hodgkin. Cancer is the second most prevalent cause of death in women during reproductive age, and lymphomas are the fourth most diagnosed cancer in pregnant women, given the peak incidence of the disease during the female reproductive phase. The aim of this report is to present a case of lymphoma during pregnancy with a live fetus.

KEYWORDS: LYMPHOMA, PREGNANCY, LYMPHOMA IN PREGNANCY

## INTRODUCTION

Lymphomas are neoplasms of the immune system originating in B, T or Natural Killer cells that lead to the appearance of tumor masses. They can be classified as Hodgkin and Non-Hodgkin. The Brazilian estimate for 2018 was 2,530 new cases of Hodgkin's Lymphoma and 10,180 Non-Hodgkin's, affecting 1,050 and 4,810 women, respectively <sup>1</sup>. Cancer is the second leading cause of death in women in reproductive age, with lymphomas being the fourth most diagnosed neoplasm in pregnant women, since the incidence peak of the disease occurs during the female reproductive phase<sup>2</sup>.

The diagnosis for Hodgkin's and Non-Hodgkin's lymphoma is made with a histopathological biopsy of the lymph node. Hodgkin's lymphoma is classified as Classic, with four subtypes (nodular sclerosing, mixed cellularity, lymphocyte depleted and lymphocyte rich) and nodular lymphocyte predominant. Non-Hodgkin lymphoma is classified as indolent (40%) or aggressive (60%) <sup>1</sup>.

Excision of the lymph node can only be done safely for the fetus in the first trimester. In addition, the staging is done with anamnesis, physical examination, laboratory tests and bone marrow biopsy. The use of imaging tests with a high radiation load must be avoided. Nuclear magnetic resonance must be considered whenever possible. Treatment with radiation and chemotherapy during pregnancy should take into account the risk-benefit for the health of the mother and the fetus. The risks of chemotherapy in the first trimester range from spontaneous abortion to malformations <sup>3</sup>.

# **CASE REPORT**

33-year-old patient, G5P2A2, with a personal history of Hashimoto's thyroiditis and gestational diabetes in previous pregnancies. In the 30th week of pregnancy the patient noticed the appearance of nodules in both armpits. She sought medical attendance where a lymph node biopsy was performed, which revealed the presence of lymphoma on 03/02/19. Affected nodules in the breasts were also identified. Despite maternal illness, 34.5-week-old fetus with normal vital signs (see figures 1 and 2). Full-term fetus, healthy newborn and placenta. Chemotherapy shortly after delivery, followed by radiation therapy with maternal death after 6 months.

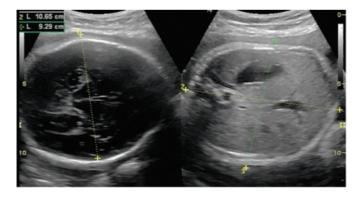


Figure 1: Obstetric ultrasound showing a normal fetus. Source: Clínica Fértile

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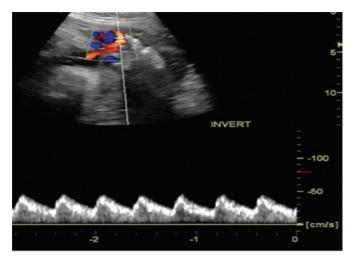


Figure 2: Obstetric Doppler showing a normal umbilical artery. Source: Clínica Fértile



Figure 3: Healthy 7 month old baby.

# **DISCUSSION**

Among the tests for HL staging we find imaging tests such as radiography and computed tomography of the chest, abdomen and pelvis, with high emission of ionizing radiation. Therefore, alternative exams are nuclear magnetic resonance and ultrasonography (USG), which are more suitable for the stage of pregnancy, although ultrasonography is an operator dependent exam <sup>2</sup>.

Although it is questioned for an increased risk of premature birth, low birth weight and a higher number of abortions of fetuses, studies show that the possibility of congenital abnormalities in children of Hodgkin mothers cannot be ruled out. In this case, morphological USG is an ally to detect malformations and fetal aneuploidies. The ultrasound follow-up ensures greater accuracy of gestational age and evaluation of fetal anatomy and development, allowing safety in decision making regarding the treatment of the patient and the

welfare of the fetus 4.

In an English study comparing 129 children of mothers who had cancer during pregnancy and underwent some type of treatment after the second trimester of pregnancy with children of healthy mothers, it can be observed that there were no significant differences between initial development and cardiac evaluation between the children<sup>5</sup>. A Danish study showed a high degree of prematurity among newborns of mothers with HL compared to babies of healthy mothers <sup>2</sup>.

# **FINAL CONSIDERATIONS**

Treatment in pregnant women with cancer is possible, as long as delays in diagnosis are avoided. Despite the associated complications, the advantage of the treatment is already evident and should be discussed and duly clarified with the patient so that she can exercise her autonomy in making the decisions regarding her treatment <sup>3</sup>.

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