Short Communication

Infrared clinical anatomy of mammary gland’s additional lobe in non-pregnant young woman

Natalia Urakova¹, Aleksandr Urakov²,¹,*, Vladimir Nikolenko³,², Lolita Kartasheva¹

¹Dept. of Modeling and Synthesis of Technological Structures, Udmurt Federal Research Center of Ural branch of RAS, Izhevsk, Russia
²Dept. of Human Anatomy, I. M. Sechenov First Moscow Medical State University, Moscow, Russia
³Dept. of Anatomy, M.V. Lomonosov Moscow State University, Moscow, Russia

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ABSTRACT

A method of infrared detection of mammary gland’s additional lobe has been developed due to changes in the local temperature of the anterior and lateral surfaces of the chest detected with a thermal imager that has an accuracy of 0.01 °C. It is shown that infrared thermography allows to diagnose, determine the location, shape and size of the additional lobe of the mammary gland in the last 3 days before menstruation.

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1. Introduction

Currently, known methods of diagnosis do not provide timely detection of an additional lobe of the mammary gland. Therefore, the process of formation and development of an additional lobe of the mammary gland still cannot be diagnosed at the stage of development and education.¹,² Usually, young women first learn about the presence of an additional lobe only during pregnancy or in the first days after birth. This is due to the action of prolactin, which causes the transformation of the mammary glands for subsequent lactation.³,⁴ At the same time, all these changes occur not only in the normal mammary glands, but also in the additional lobe of them. Therefore, some young women have swelling in the projection area of this additional lobe, and sometimes pain.⁵

*Corresponding author.
E-mail address: urakoval@live.ru (A. Urakov).

The aim of the study was to develop a method for infrared detection of additional lobe of mammary gland in young women before the first pregnancy. First, we studied scientific articles and inventions that were essentially the closest to the goal. The analysis of the obtained information allowed us to choose the following invention as a prototype: "Method for breast infrared screening growths" (RU patent 2561302). The essence of this method is that using a thermal imager with the function of color image of the breast surface on the screen, the dynamics of its local temperature is observed during the process of blowing the gland with room temperature air. When a site with local hypothermia or hyperthermia appears, a conclusion is made about the presence of a neoplasm, and its shape, size, and localization are specified.

However, this method does not provide detection of an additional lobe of the mammary gland. The fact is that the known method does not provide monitoring of the dynamics of the local temperature of the chest surface during the
the additional lobe of the mammary gland of the menstrual cycle (28th day of the menstrual cycle). The foci of local hyperthermia, which appeared only 3-2 days before menstruation, were detected in 7 young women from the control group. Moreover, the additional lobes of the mammary glands were not found in young women. It is important to emphasize that these additional lobes of the mammary glands were detected in 7 young women. In particular, with the help of a thermal imager, the possibility of infrared imaging of additional mammary glands was identified by foci of local hyperthermia, which appeared only 3-2 days before menstruation and for 1-2 days it increases by an average of 0.8 °C compared to the skin temperature in neighboring areas. The focus of local hyperthermia of the skin in the area of the projection of the additional lobe of the mammary gland can be detected using infrared thermography of the front surface of the chest, which should be performed daily a week before menstruation. The localization, shape, and size of the local hyperthermia focus during this period of the menstrual cycle indicate the localization, shape, and size of the additional breast lobe.

2. Conflict of Interest

None.

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Author biography

Natalia Urakova Associate Professor
Aleksandr Urakov Professor
Vladimir Nikolenko Professor
Lolita Kartasheva Assistant Professor
