NEWS RELEASE

To the press and whom it may concern

July 11, 2023
Telemedica Inc.
National Center for Child Health and Development

Building Education Systems for learning “auscultation” for newborns ～Contributing to amelioration in the quality of neonatal care by improving the skills of perinatal caregivers～

National Center for Child Health and Development (located in Okura, Setagaya-ku, Tokyo; President: Takashi Igarashi) and Telemedica Inc. (located in Aoba-ku, Yokohama-shi, Kanagawa; CEO: Kiyoshi Fujiki) conducted joint research and developed an educational system for learning auscultation of neonates.

“Auscultation” is the listening to heart sounds and lung sounds to check for abnormalities in the heart and respiratory organs. For example, if the heart valve does not close tightly and there is backflow of blood, various heart murmurs can be heard depending on the type of disease.

In this joint research, we recorded the heart and lung sounds of 50 neonates born at the National Center for Child Health and Development who had some kind of heart or breathing abnormality, and Telemedica Inc. incorporated them into the auscultation learning system what already developed. With this, medical professionals who are learning auscultation will be able to listen to the any abnormal heart sounds of neonates anytime, anywhere using their own devices.

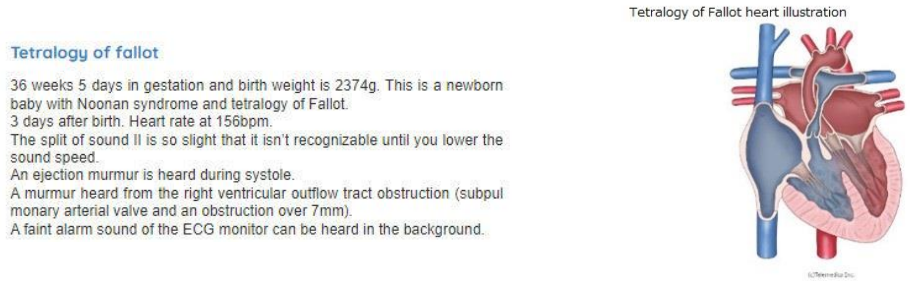
Until now, there was no educational system that summarized the neonatal heart sounds and lung sounds, so medical professionals had no choice but to hone their skills in the clinical setting. With this educational system, they can efficiently learn about neonatal auscultation with abnormalities. We believe that we can contribute to the improvement of neonatal medicine.

【Figure1：the screen of the auscultation education system】

【Press release points】

- We have developed an educational system that records the heart and lung sounds of 50 neonates with some kind of heart or respiratory abnormality, and listens to them repeatedly for medical personnel to improve their training. (Figure 1)
- Among the recordings are neonatal heart and lung sounds with diseases such as Fallot's tetralogy, patent ductus arteriosus, and ventricular septal defect. The neonatal heart and lung sounds are faster than those of adults, and they are difficult to listen due to various noises such as crying and restlessness. This makes it difficult to detect any abnormalities in them.
- When posting in this system, noise has been removed as much as possible and edited so that it is easy for medical professionals to listen.
- With this system, you can learn the relationship between the auscultation site and heart/lung sounds because you can listen to the sounds of the neonatal image displayed on the screen as if you were actually auscultating.
- It explains the diseases and conditions of neonates and the characteristics of heart sounds, so you can learn more efficiently about auscultation. (Figure 2)
- Until now, there was no educational system specialized in neonatal auscultation, but we believe that this will contribute to the development of medical professionals who can detect neonatal abnormalities.

- The results of this research have been incorporated into educational systems that are already deployed around the world, so they can contribute to the health of neonates not only in Japan, but in all countries and regions.
- You can listen to a sample of the neonatal heartbeat by scanning the QR code on the right.



【Figure2：the screen of the auscultation education system】

《Comment from Dr. Shoichiro Amari, Division of Neonatology, National Center for Child Health and Development》

In this research, we developed an educational system for learning auscultation skills, which are essential for detecting abnormalities in newborns and for post-treatment follow-up. We hope that this research will enable more perinatal caregivers to better observe neonates. Since this educational system has already been deployed not only in Japan but around the world, we believe that it can contribute to the health and bright future of neonates born in all regions.

《Comment from　Kiyoshi Fujiki, CEO of Telemedica Inc.》

Auscultation is said to have diagnostic performance comparable to that of state-of-the-art medical equipment if the technique is refined. Experts around the world say that auscultation is also important for building bonds between medical professionals and patients. We have been working on the development of the auscultation education system from this point of view.

This time, through joint research with the National Center for Child Health and Development, we were able to develop a neonatal auscultation training system unlike any other in the world. We hope that this system will contribute to neonatal medicine.

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