Ultrasound / Interview report

Working together to achieve better pediatric care: The approach taken by Ibaraki Children's Hospital using ApliGate and ApliCam

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Introduction

Ibaraki Children's Hospital provides pediatric healthcare as a core regional hospital, and thus tends to select ultrasound for diagnostic imaging more frequently than other hospitals. Ibaraki Children's Hospital also accepts referrals from other hospitals for same-day examinations, in addition to offering emergency services out of hours.

Ibaraki Children's Hospital in Mito, Ibaraki

Challenges in pediatric imaging

However, pediatric care in many regions, not only Ibaraki Prefecture, is facing a number of severe challenges, including the need to cover wide service areas with a limited number of specialist physicians and to provide high-quality medical services despite a small pediatric caseload.

Background to ApliGate and ApliCam

Canon developed ApliGate and ApliCam to respond to such local medical challenges and to assist healthcare professionals in carrying out their professional duties. ApliGate was released in June 2021 as a technology for sharing clinical images remotely in real time while performing ultrasound scanning. The diagnostic images acquired can be viewed remotely in real time on a tablet or smartphone. ApliCam, released in August 2022, is a system that allows both ultrasound images and video images captured by a camera to be displayed simultaneously. In the past, body marks and annotations were used to show the relationship between the scanning position and the ultrasound images obtained. But now, ApliCam can visually record where and how the transducer is applied, providing a clearer understanding of the positional relationships. When ApliCam is used in combination with ApliGate, the ultrasound images can be combined with video images showing the scan position in real time and shared with remote sites.

Mr. Asai is Chief of Pediatric Ultrasound and the Diagnostic/Training Center at Ibaraki Children's Hospital and an expert in pediatric ultrasound. His role includes coordination of medical care on a 24/7/365 basis; in addition, he trains physicians from all over Japan who want to learn more about ultrasound technology. He actively promotes the development of pediatric ultrasound diagnosis as a representative of the NPO Ibaraki Children's Echo Seminar. Canon's ultrasound team supports Mr. Asai's passion to "provide better medical care for children" and the new concepts of ApliGate and ApliCam help him to implement work procedures that work towards his goals. Mr. Asai has been working with Canon since the introduction of the first Aplio system. We are interested in how he uses ApliGate and ApliCam in his clinical practice and how they can be employed most effectively. He kindly made the time to speak with us.

What are your goals for the ultrasound service?

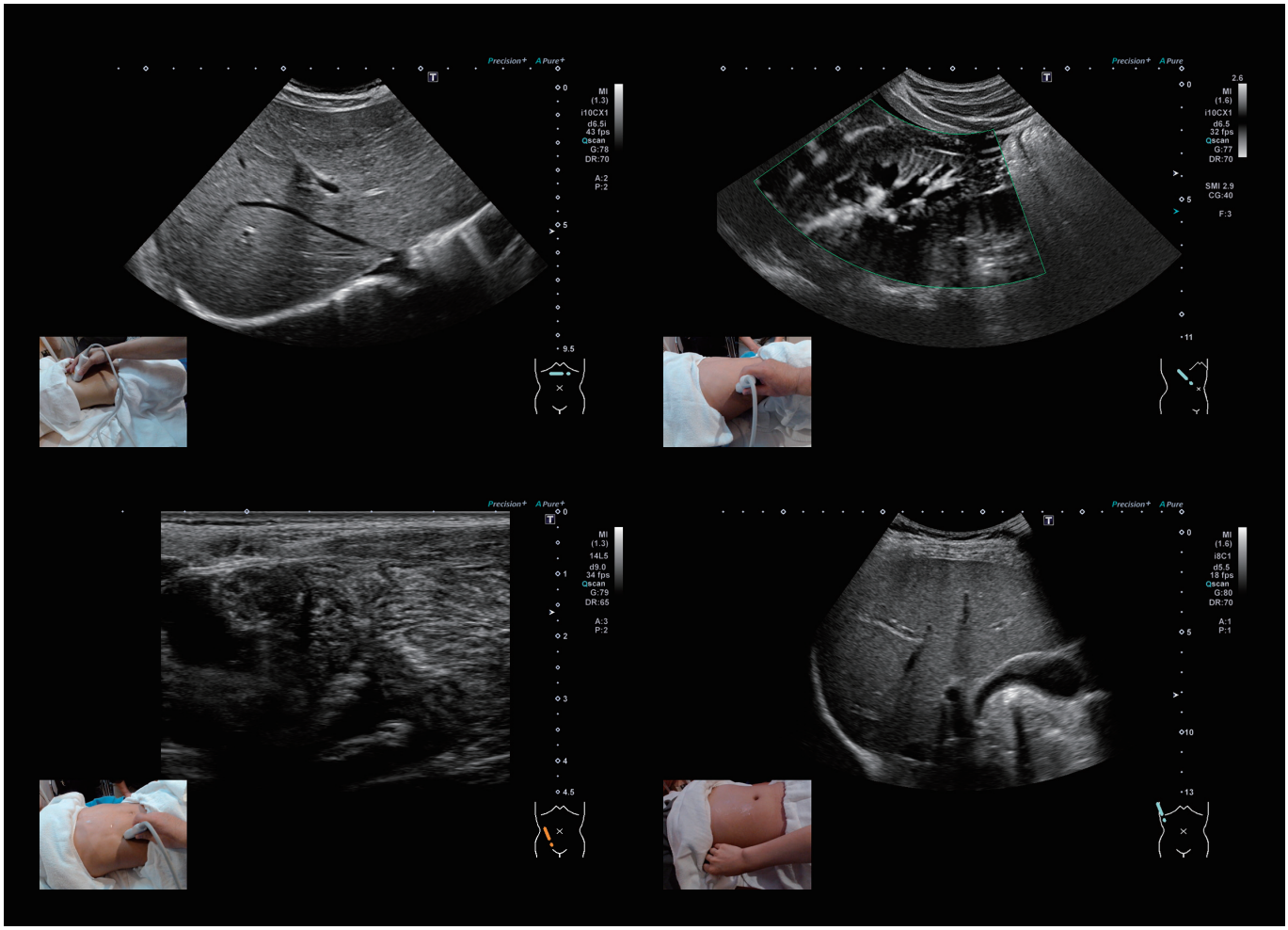
My goal is to ensure stress-free medical care for both children and their parents. It is my firm conviction that ultrasound is the diagnostic modality of choice because it is non-invasive and less stressful for pediatric patients. I strongly feel the need to minimize anxiety for both children and their parents. My goal is to provide immediately available and reliable pediatric care to the whole community. At our hospital the examination room has an Aplio i800 system connected to ApliGate and ApliCam. The screen above the bed shows projected videos children would like, which distracts the attention of pediatric patients while the examination. Preparation of the examination room is also an important part of pediatric care.

Ultrasound room at Ibaraki Children's Hospital with connecting ApliGate and ApliCam to Aplio i800

What is your experience working with Canon and how have they helped you to achieve your goals?

Ibaraki Children's Hospital has been working closely with Canon as a joint research partner, providing expert clinical evaluation of ultrasound products before they are released on the market. Our work wouldn't be possible without the support of companies like Canon. Twenty years have passed since my first impactful encounter with Aplio at the Japan Society of Ultrasonics in Takamatsu, Kagawa Prefecture.

Since then, Canon has strongly supported my belief that ultrasound is the key to diagnosis. And we're now focusing on our latest goal of remote medical care. At Ibaraki Children's Hospital, ApliGate and ApliCam are used as a tool to support remote medical care. ApliGate and ApliCam connect me directly to the examination room so I can provide advice and guidance while viewing the images as they are acquired. They can also be used as an educational tool. For example, online seminars can be conducted in real time by connecting the examination room to remote training sites.



ApliCam and ApliGate can simultaneously show ultrasound images and video images online anytime and anywhere. Therefore, ApliCam allows the immediate understanding of where and how the transducer is placed visually.

Please scan the code or access the following link to view the interview video on the clinical utility of ApliGate.
https://www.youtube.com/watch?v=URyywDo1JVk

Please scan the code or access the following link to view the use case video of ApliGate at Ibaraki Children's Hospital.
https://www.youtube.com/watch?v=cUEGy8HQsek

What is the clinical usefulness of these new tools?

Identifying the area that's being scanned is a very important piece of information in providing appropriate instructions. The other day, I used ApliGate and ApliCam to view an intussusception even though I was away from the hospital. Being able to view a video of the transducer being applied together with the ultrasound images was very helpful to me in identifying the specific segment of the intestine that was affected. I could provide detailed instructions to the staff at the hospital by looking at my tablet while I was sitting in the Shinkansen bullet train. I think the addition of ApliCam to the previously introduced ApliGate has further increased its clinical usefulness. ApliGate and ApliCam may not be that much of a technical challenge, but technology that allows an ultrasound specialist like me to remotely view the scan position and provide clinical advice based on the images is exactly what I had always dreamed of to improve pediatric care in our community. I'm very grateful to Canon for being a pioneer in developing this technology and making it a practical reality. ApliGate and ApliCam are also very useful as educational tools. Let's keep working together to provide even better healthcare in the future.

Mr. Asai in the ultrasound room at Ibaraki Children's Hospital

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Model number: TUS-AI800
MOIUS0137EA 2022-11 CMSC/SO/Printed in Japan

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