



KONICA MINOLTA

Effectiveness of Introduction of The Ultrasound Diagnostic System for Musculoskeletal Diseases

Dr. Wong Kwun Hung, Kevin

Associate Consultant

Department of Orthopaedics & Traumatology,
Kwong Wah Hospital, Hong Kong



~Better Understanding, More Satisfaction~

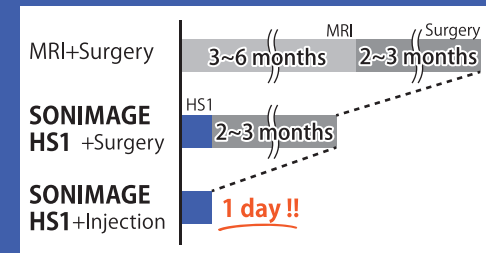
The HS1's superb image quality makes it easy to demonstrate different pathologies to junior doctors and other healthcare professionals including therapists. Being able to quickly and confidently visualise regions of the body under ultrasound improves the understanding of many orthopaedic conditions.

Using ultrasound has also resulted in an unexpected but

welcome increase in patient satisfaction. Being able to see what the problem looks like in real time has increased patient confidence in us and provided motivation to continue with the treatment they are receiving.

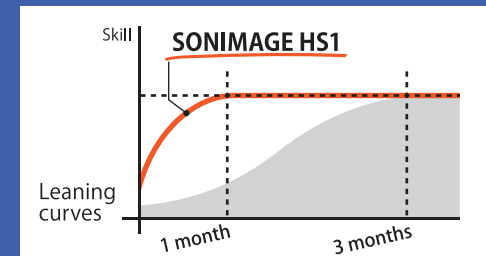
Ever since the HS1 arrived at my department a year ago, I have been using it extensively. All of us have found the HS1's value to be much more than we expected.

»» Compared to MRI, ultrasound can significantly reduce treatment times.



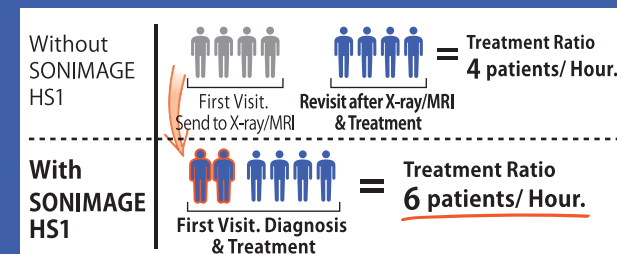
Normally MRI and/ or CT appointments are always full in the Hong Kong public sector. Patients may have to wait three to six months. After an MRI/CT exam, patients have to wait an additional few months for surgery since waiting list can be long in some hospitals. In the case of a rotator cuff tear, if you use the SONIMAGE HS1, you rarely need to use MRI. Additionally, in certain cases where simple injection is required, this can be done under ultrasound guidance in the same clinic session with added accuracy and confidence.

»» Learning curve for the HS1 vs. the competition



In my experience and observation, it may take at least three months to feel comfortable using ultrasound for MSK. This is because the image quality of some machines are simply not enough and the user interface is quite complicated. The SONIMAGE HS1, with its high image quality and user friendly console design, makes it easier to diagnosis using ultrasonography within a month. Younger doctors who attended my seminar have been able to use SONIMAGE HS1 within a few hours.

»» Difference in patient outcomes/treatment with and without ultrasound



By not having ultrasound in my practice I could not examine and treat patients in a single visit. Previously, I would have to wait for CT or MRI results to determine treatment. This is not an efficient way to spend our time at one of the busiest hospital in Hong Kong. Ultrasound has provided the solution of not only reducing the waiting time of patients but increasing my confidence of making the diagnosis on the first visit.



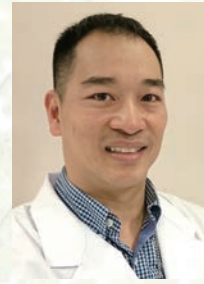
SONIMAGE HS1



KONICA MINOLTA, INC.

<http://www.konicaminolta.com/healthcare/>

Distributed by:



Dr. Wong Kwun Hung, Kevin

Associate Consultant
Department of Orthopaedics & Traumatology,
Kwong Wah Hospital, Hong Kong

I graduated University College Dublin Medical School in 2001. I returned to Hong Kong and began training in the Department of Orthopaedics and Traumatology at Queen Mary Hospital. I received my Orthopaedic specialist titles in 2009. Soon after I moved to work at Kwong Wah Hospital. My special area of interest lie in Arthroscopic Shoulder Surgery and Musculoskeletal Ultrasound. There are a few projects in the works, in addition to clinical research, I am most active in Musculoskeletal Ultrasonography education and Ultrasound-guided intervention in Orthopaedics.



ISSUES

Introduction:

Seeking more efficient and more patient-friendly workflow

Being one of the busiest hospitals in Hong Kong with an Orthopaedic out patient clinic having one of the longest waiting time is not something my unit will proudly advertise. Manpower shortage is of course a main reason, but with increasing people's demand for good healthcare service and also with current global trend of increasing litigation, many young doctors defer to extra imaging such as CT and MRI. The workload of many radiology departments is in a rapid continuous rise. Our thought is to aim at the reduction to some of the imaging investigation without jeopardising patient safety or treatment quality: an answer came not from a new technology, but one that has been in existence for nearly half a century. This answer is Ultrasonography.



Ultrasound myth. "Difficult, Unclear and Operator dependent"

The perpetual misconception of ultrasound being a difficult skill to master plagues our community. The image quality of many ultrasound systems is not as clear as CT or MRI. When doctors do try and adjust the image parameters, often the amount of buttons and knobs is overwhelming. This is a reason that the phrase "ultrasound is highly operator dependent" is mentioned in textbooks and undoubtedly scares off many doctors.

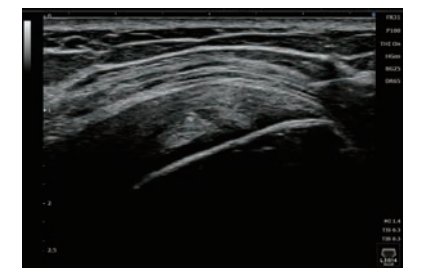
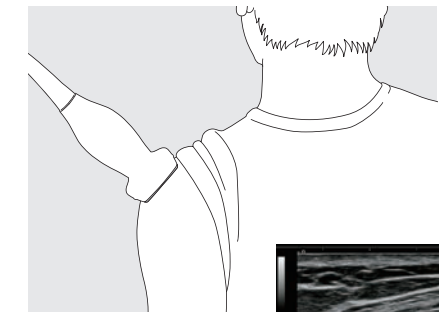
Yet this statement cannot be further from the truth. Ultrasound, like anything else, is an acquired skill, one that needs practice. However if one cannot make heads or tails from an image, one will quickly lose interest. The more accurate description should therefore be, "ultrasound is machine (image quality) dependent".

SOLUTIONS

~SONIMAGE HS1 Superb Image Quality beyond MRI/CT~

When the HS1 is compared to systems in its class, image quality of the HS1 surpasses the competition. We have been able to demonstrate rotator cuff tears that were underestimated on MRI and later confirmed intraoperatively. The ability to immediately view soft tissue lesions has saved many hours and even days waiting for other forms of imaging.

The image quality remains excellent even when using color mode. This has proven to be very useful when assessing lesions. Losing definition of lesions while assessing the vascularity is undesirable, but previously unavoidable. The HS1's image quality is the best for MSK ultrasound operation.



~SONIMAGE HS1 Superb Operation Simplicity~

The first impression can be summarised by two words "simplicity and clarity". The intimidating array of buttons, switches, sliders and keyboard found on other systems is replaced by 5 buttons, 3 knobs, and a trackball. A much more welcoming appearance. A large touch screen monitor is next to greet the user. Many of the junior doctors have found the HS1 simple to use even without prior experience with ultrasound. This is what I am most pleased to hear as we have been trying to promote ultrasound as the "stethoscope of an orthopaedic surgeon".

