
LETTER TO THE EDITOR

Interventional Musculoskeletal Radiology: an Underutilised Resource in Hong Kong

To the Editor: It was a great pleasure to read the March 2017 issue of the *Hong Kong Journal of Radiology* and the accompanying editorial by Dr. MK Yuen highlighting the strength and interest in musculoskeletal (MSK) radiology across Hong Kong. To build on this initiative, we would like to also emphasise the growing importance of MSK interventional radiology (IR) in augmenting the diagnostic aspects of MSK imaging.

Over the past three decades particularly, a number of radical transformations have occurred in IR, enabling therapeutic intervention in many disease states previously considered untreatable. IR typically functions as an adjunct to medical, surgical, and therapeutic radiation treatment and, in some instances, has become the primary treatment option.

IR is a vital component in the treatment of vascular, neurovascular, hepatobiliary, and gastrointestinal disease. The role of IR in the management of disorders related to the MSK system has also increased. This comprises elements such as image-guided bone biopsy, thermal ablation of both benign and malignant tumours, as well as cement injection for metastases and other skeletal lesions. Radiofrequency ablation followed by thermal ablation has transformed the treatment of osteoid osteomas and is now the preferred treatment for this lesion. Image-guided biopsy has largely replaced open biopsy for bone or soft tissues lesions.

The development of image-guided cement injection has revolutionised the way vertebral compression fractures are treated (vertebroplasty). Cement injection for extraspinal bony metastases, particularly of the pelvis, has provided a new and effective way of palliating metastatic bone disease in patients otherwise unamenable to effective treatment. Such techniques have been enhanced by the use of thermal ablation techniques (radiofrequency ablation, cryoablation, microwave) such that many patients with unremitting pain can now experience dramatic pain relief with decreased narcotic

use. This is potentially a revolutionary way to modify treatment of excruciating bone pain. Image-guided treatment has been shown to significantly improve quality of life.

Nonetheless, utilisation of MSK IR procedures throughout the world has been patchy and incomplete, with many patients not having access to these highly effective MSK IR treatments. This is due in part to the way in which diagnostic radiology and IR have developed. Most MSK radiologists are trained largely in diagnostic imaging techniques. The focus has been on the rapidly evolving domains of magnetic resonance imaging and ultrasonography. Most MSK radiologists do not have the time or possibly even the inclination to introduce a wider range of MSK IR procedures. On the contrary, the number and scope of procedures performed by interventional radiologists have expanded dramatically. There is so much for the interventional radiologist to do in the vascular, hepatobiliary, gastrointestinal, and genitourinary systems that most have little time to also incorporate MSK IR into their clinical practice. The volume of work is already overwhelming for most interventional radiologists. The crossover between the two domains therefore remains relatively small and MSK IR has fallen between the cracks in many instances.

To complicate this further, our colleagues in clinical practice are often not aware of the existence or availability of most MSK IR procedures and therefore seldom request them. This lack of perceived clinical demand does not inspire busy radiology departments to develop this as a new service or incorporate it into training programmes. Nonetheless, most radiology departments do possess the necessary expertise to get MSK IR up and running, given that most of the basic skills required are broadly transferrable from general IR. To successfully establish an MSK IR programme, it is necessary to establish a referral base by educating the clinicians, particularly those from the orthopaedics,

oncology, rheumatology, geriatrics, and general medicine disciplines, as to the benefits of MSK IR. This can be done through personal communication or multidisciplinary meetings where patient management is discussed. Frequent reminders to refer patients are usually necessary in the early stages until the service becomes established. This interaction becomes a gratifying experience for all as it is surprising how much we can teach each other, and it helps build a constant referral base. The referral procedure needs to be made simple and direct, ideally with an MSK IR point person to contact. Many MSK IR procedures can be performed in an outpatient setting. On-going medical education lectures, overseas attachments, and learning from visiting experts will help shorten the learning curve and broaden the MSK IR skill set.

To summarise, MSK IR is currently underutilised

in Hong Kong. To address this, we should establish this service within our own departments, educate our radiological and clinical colleagues about the benefits of MSK IR, simplify the referral process, minimise any inconvenience to hospital workflow, and learn from the experience of more skilled MSK IR practitioners.

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