Role of Ultrasonography in Upper Limb Musculoskeletal Interventions

Essay

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بسم الله الرحمن الرحيم

" ذلك فضل الله يوتيه من يشاء و الله ذو الفضل العظيم"

صدق الله العظيم

(سورة الجمعة)

"ايه (4) "

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List of Abbreviations

AC	:	Acromioclavicular.
APS	:	Abductor Pollicis Longus.
Bi	:	Biceps tendon.
CEO	:	Common Extensor Origin.
CFO	:	Common Flexors Origin.
CSA	:	Cross Sectional Area.
CT	:	Computed Tomography.
CTS	:	Carpal tunnel syndrome
dFT	:	Deep Flexor Tendon.
DMl	:	Deltoid Muscle on a longitudinal view.
DMt	:	Deltoid Muscle on a transverse view.
ECU	:	Extensor Carpi Ulnaris.
EPB	:	Extensor Pollicis Brevis.
F	:	Femur.
Fa	:	subcutaneous Fat.
FBs	:	Foreign bodies.
Ft	:	Flexor tendons.
LHBBT	:	Long Head of Biceps Brachii Tendon.
LS	:	Longitudinal Section.

List of Abbreviations

MN	:	Median Nerve.
MSK	:	Musculoskeletal.
MSUS	:	Musculoskeletal Ultrasound.
NSAIDs	:	Non Steroidal Anti Inflammatory Drugs.
Ph	:	head of the proximal phalanx.
pu	:	A1 pulley.
sFT	:	Superficial Flexor Tendon.
SLAP	:	Superior Labral Tear From Anterior To Posterior.
SSNB	:	Suprascapular Nerve Block.
Sy	:	synovial recess.
TFCC	:	Triangular Fibrocartilage Complex.
TS	:	Transverse Section.
UA	:	Ulnar Artery.
Ul	:	Ulna.
US	:	Ultrasound.
vP	:	volar plate.

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Introduction

Bed side procedures involving the musculoskeletal system have traditionally been performed by highly trained specialists. Due to reliance on a select group of practitioners, many procedures may be delayed despite their often urgent nature. As a result, a need arose for more portable and accessible means to allow performance of emergent musculoskeletal procedures by adequately trained emergency personnel. The emergence of ultrasound-assisted bed side techniques and increased availability of portable sonography provided such an opportunity in select clinical scenarios ***(Royall et al., 2011).***

Since its inception, the role of ultrasound in musculoskeletal interventions has expanded immensely. This is due to several factors including technological advancements, lack of ionizing radiation, and improved accuracy and efficacy over blind techniques which rely on anatomic landmarks ***(Sabeti-Aschraf et al., 2011).***

Ultrasound affords the ability to diagnose pathology, dynamically examine the region of interest, and guide needles in real time avoiding vital non-targeted structures. The widespread use is not only secondary to ultrasound being safe, effective, and accurate, but also a reflection of a growing patient population presenting with common musculoskeletal injuries involving muscle, tendon, and ligaments often