# بسم الله الرحمن الرحيم


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# التوثيق الالكتروني والميكروفيلم

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## التوثيق الإلكتروني والميكروفيلم

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# *Benign and malignant cartilagenous tumors of the hand*

**Essay**

**Submitted for partial fulfillment of master degree**

**In**

**Orthopaedic surgery**

**By**

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# Introduction

God has provided man with two hands to be his primary tool for exploring and make use of the environment. It is also a basic sensory organ that in many circumstances exceeds even the eye in collecting information. The hand as a part of the body may be affected by a variety of pathological conditions where tumors are one of them **(McFarland, 1982).**

Primary bone tumors of the hand and wrist are unusual, but if present are frequently chondrogenic in origin **(O'connor and Bancroft, 2004).**

Cartilagenous tumors of the hand are usually detected early because of pain, impairment of function or obvious swelling **(Mark and Jobe, 1992).**

Man is fortunate because of the malignant growth of cartilagenous tumors of the hand are often preceded by benign lesion that are well known precursors of the cancer **(Dick and Struch, 1997).**

For its diagnosis we can use plain x-ray with its characteristic radiological features in some cases; but Magnetic resonance imaging (M.R.I) is helpful to differentiate between benign & malignant cartilagenous tumors of the hand **(Plate and Posner, 2003).**

For its treatment, we depend on clinico-pathologic and radiologic finding and multidisciplinary team including muscular-skeletal surgery, radiologist & a pathologist **(Marco and Healey, 2000).**

Treatment of cartilagenous tumors of the hand most commonly surgical with possible exceptions **(Mark and Jobe, 1992).**

# Aim of the study

- To review a literature on benign and malignant cartilagenous tumors of the hand.
- Proper diagnosis.
- Effective management which will result in good function of the hand after removal of the tumors.

# Relevant anatomy of the hand

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## Osteology of the hand:

The hand consists of 19 bones arranged in 5 rami. Each ramus consists of one metacarpal bone besides 3 phalanges except the first ramus which has only 2 phalanges. These bones articulate at wrist joint, metacarpo-phalangeal joint and interphalangeal joints **(McMinn, 1996).**

## Metacarpus:

The metacarpus consists of five metacarpal bones. These are long bones, with a distal head, shaft and expanded base. The rounded heads articulate with the proximal phalanges. Their articular surface are convex, less so transversely, and extend further on the palmar surfaces, specially at their margins. The metacarpal bases articulate with the distal carpal row one with each other, except the first and second metacarpal bases **(Peter and Williams, 1999).**

## Phalanges of the hand:

There are 14 phalanges, three in each finger, and two in the thumb. Each has a head, shaft and proximal base. The shaft tapers distally, its dorsal surface transversely convex. The bases of the proximal phalanges carry concave, oval facets adapted to the metacarpal heads; their own heads smoothly grooved like pulleys and encroaching more on to the palmar surfaces. Confirming to this, the bases of the middle phalanges carry two concave facets separated by a smooth ridge. Middle phalangeal heads are also pully like, to which the bases of the distal phalanges are adapted.