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*Letter to Editor*

# Re: Giant cell tumor in the proximal phalanges of the hand: A report of two cases treated with a nonbiological construct

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**Quick Response Code:**

Dear Sir,

I congratulate Altayeb *et al*. for their work describing the giant cell tumor of bone (GCT-B) in the hand and its management.[1] They have provided an alternative reconstructive option following excision of these tumors in the hand, emphasizing finger preservation and functional outcome. But the management of these tumors in the hand with excision and/or curettage followed by reconstruction using K-wire cement spacer construct is debatable.

In the second case of their report, the authors described a recurrence, an exchange of the construct with excision of local recurrence (LR) being done. I beg to differ with this approach as it is fraught with risks of dissemination and seeding of tumor cells locally and systemically. Furthermore, though the authors reported the patient as being disease-free for more than five years, this cannot be the standard practice.

Before I delve deeper into the controversies surrounding the management of GCT-B in the hand, I will highlight an example of a similar case treated in our institution two years ago using a different albeit radical approach. A 42-year-old male patient presented to us with a two-year history of swelling in the right index finger. Preoperative imaging and subsequent biopsy confirmed GCT-B [Figure 1(a)] and [Figure 1(b)]. Subsequently, wide local resection of the tumor was performed, which entailed amputation of the finger through the neck of the proximal phalanx as it was a Campanacci III lesion. Post-op follow-up at three months showed well-healed wounds and no recurrence [Figure 2(a)] and [Figure 2(b)].

GCT-B of hand, although considered benign tumors, are locally aggressive tumors, are multicentric, metastasize, and ultimately result in death. Such tumors that arise in the hand must be approached with caution and treated as a low-grade malignancy, as they are more prone for local recurrence and have a greater tendency to metastasize than similar tumors elsewhere over the body.[2] Local recurrence (LR) rates as high as 80% may be seen after intralesional therapy with curettage, even with the use of phenol as adjuvant therapy.[3] There have been reports of lung metastasis following GCT-B in the hand.[3,4]

Isolated curettage and bone grafting have been associated with an unacceptably high risk of LR in hand GCT-B.[2,3] Wittig et al., in their series, reported good results with combination therapy comprising – curettage, cryotherapy and cement – k wire construct reconstruction of hand GCT-B. They postulated that the addition of cryotherapy to curettage would achieve

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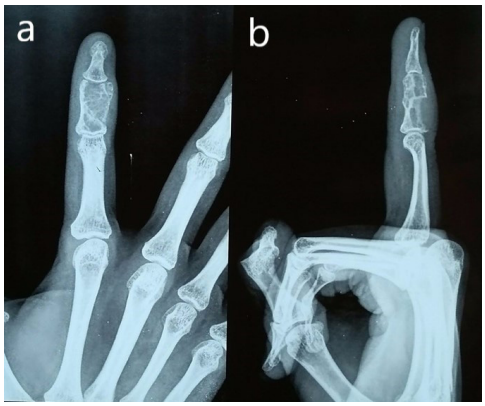


**Figure 1:** (a and b) Preoperative radiographic images showing giant cell tumor involving the middle phalanx of the right index finger (Campanacci III).

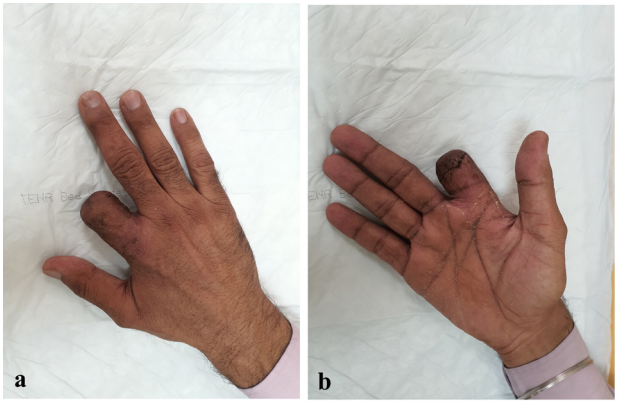


**Figure 2:** (a and b) Postoperative follow-up images at three months showing well-healed right index finger amputation stump with no local recurrence.

better local tumor control than curettage alone. They further stated that all Campanacci stage I, II lesions and select Campanacci III lesions (with adequate bone stock distally and proximally) would be amenable for this type of treatment.[5]

However, phalangeal and metacarpal lesions that perforate the cortex (Campanacci III) are best treated by amputation or wide en bloc resection and reconstruction.[2] Isolated curettage and bone grafting with/without application of phenol cannot be advocated for the treatment of GCT-B in the hand. Cryosurgery, when used, is associated with significant risks such as soft tissue necrosis, wound infection, pathological fracture, neurapraxia and is best done by those with significant experience with it.[2] Following wide local excision, reconstructive options in the hand include – toe phalanx transfers, vascularized metatarsophalangeal joint transfers, vascularized medial femoral corticoperiosteal (MFC) flap and medial femoral trochlear osteocartilaginous flap (for functional joint reconstruction).[2,6,7]

Distal carpal lesions are best treated by wide local resection and reconstruction with limited carpal arthrodesis. In addition, GCT-B of the proximal carpal row can be treated by proximal row carpectomy (PRC). The most effective method in dealing with distal radius lesions is wide local excision and reconstruction. It should be noted that distal radius lesions are at increased risk for metastasis.[2]

There is still an ongoing debate over the optimal management of GCT-B in the hand. Still, there is no doubt that the oncological principles of negative margins (R0 resection) and the reconstructive goals of limb preservation, functional outcome, and aesthetic appearance must be balanced with the ultimate outcome of higher survival rates and better quality of life. Therefore, in the future, a collaboration between different units by setting up an International GCT-B working group with a registry of cases and validation studies for the various techniques are warranted to optimize the care for patients with these tumors.

## AUTHOR'S CONTRIBUTION

The author has critically reviewed and approved the final draft and is responsible for the manuscript's content and similarity index.

### Declaration of patient consent

The author certifies that he has obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

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### Conflicts of interest

There are no conflicts of interest.

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