Lipomas in the hand: a common tumor or a potential pitfall?

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Objective

Lipomas are slow growing benign fatty tumors which occur anywhere in the body. Common sites are neck, shoulders, back, abdomen, arms and thighs. However, lipoma is an unusual cause of a mass in the hand which can present initial diagnostic challenges. We reviewed our experience of cases of lipomas in the hand and discuss their diagnostics, management and pitfalls.

Methods

Our sarcoma service provides a rapid access single referral point for the initial assessment and investigation of all soft tissue tumors from any body site. Having been referred several hand lipomas, we carried out a review of our practice. Clinical databases were searched to identify cases of interest. Individual case files were reviewed with particular focus on presentation, diagnostics and surgical management. We also performed a literature review using search terms 'hand lipoma' and 'lipomatous tumors.' Online medical databases were used alongside textbooks on hand surgery.

Results

Database search identified several cases. We focused on our most recent cases as being of interest. Ages ranged from 30 to 57 years and presented with symptoms of a lump in the hand for between two to five years.

One patient had a relatively small lipoma but noticed some paresthesia to two fingers. She was however functionally not compromised. Another patient had a very large multi-lobulated lipoma increasingly interfering with her job due to size.

After completion of relevant imaging, biopsy and multidisciplinary discussion in the sarcoma team, the two patients with lipomas underwent surgical excision and the sarcoma patient referred to a further specialist center. Careful planning of incision lines for skin flap survival was carried out and intra-operative anatomical distortions were taken into account.

Our literature search identified a large number of papers regarding lipoma in the hand. Most reported cases are asymptomatic and many reports relate to median nerve symptoms and/or incidental finding during carpal tunnel surgery. Overall, the advances of medical imaging technology have improved diagnostics and become more important in the management pathway. Literature search yielded 426 papers on hand tumors, with 158 reports on lipomas. Our sarcoma service provides a rapid access single referral point for the initial assessment and investigation of all soft tissue tumors. Areas of incomplete fat suppression with nodular and thick enhancing septa as well as a solid enhancing soft tissue component are suspicious of malignancy, and liposarcoma should be excluded. Recurrent lipomas should also be viewed with suspicion, since the risk of malignancy is higher.

Meticulous MR also helps in the selection of suspicious areas for histological evaluation. Non-arthrographic guided biopsies can result in non-representative biopsy samples, potentially leading to misdiagnosis. Meticulous surgery is curative and provides relief for associated neuropathy. Incisions need to be carefully planned for skin flaps viability and to avoid scar contracture. Intra-operatively technical challenges can be encountered due to loss of normal/displaced anatomy of tendons and neurovascular bundles. Patients need to be informed about the risk of neurovascular damage with surgery and conservative management is acceptable if functionally asymptomatic.

Conclusion

Lipomas in the hand are uncommon and may present with minimal symptoms. Early referral to a specialist center is important to exclude sarcoma as well as choosing the correct imaging for diagnosis, followed by biopsy as appropriate. Technical challenge may be encountered during surgery due to the distorted/displaced anatomy of neurovascular bundles and tendons. Skin integrity need to be taken account of if the tumor is large and multiloculated.

Excerpts of Literature