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JCIMCR OPEN ACCESS Journal of Clinical Images and Medical Case Reports

ISSN 2766-7820

Case Report

Open Access, Volume 3

A lump of the trunk: Non lipoma or epidermoid cyst

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Received: Jun 10, 2022

Accepted: Jul 06, 2022

Published: Jul 13, 2022

Archived: www.jcimcr.org

DOI: www.doi.org/10.52768/2766-7820/1946

Abstract

Lumps and bumps are relatively common presenting problems in the primary-care/general practice, and their differential diagnoses diverse with anatomical location. Clinical and imaging diagnosis of soft-tissue lumps are challenging at times, and require partial or total excision for diagnosis and management. Following relevant history and examination, ultrasonography is useful as a next step non-invasive tool to be able to evaluate the size, attachment, and vascularity of the lump prior to procedure, and also confirmation of common lumps such as lipoma or cyst. We present here a case of trunkal (chest-wall) soft-tissue lump which turned out a schwannoma in a 17-year-old male, and briefly described how to manage it.

Keywords: Schwannoma; Soft tissue lumps; Lumps and bumps; Neurilemmoma.

Introduction

Lipomas and epidermoid cysts are commonly observed soft-tissue lumps/tumors over the trunk as well as the entire body [1-3]. Nevertheless depending on the anatomical location, other particular lumps such as lymphadenitis, branchial cyst, thyroglossal cyst on the neck, and ganglion, synovial cysts near joints, can also occur. Box 1 lists different types of lumps for trunk (chest wall) [3-5]. When the lump is deeply seated subcutaneously, subjective texture such as soft, firm may sometimes become difficult to interpret. Moreover, not all of cysts give a cystic consistency (eg, pilar cysts have thick wall and might let you feel firm in texture); Cysts can present intradermally or subcutaneously, and epidermoid cysts still misnomerly termed as sebaceous cyst, are not always present with punctum [2]. As a result, diagnostic and management challenges strike us at times.

Box 1: Soft tissue lumps of the trunk.

1. **Benign (mesenchymal origin):** Lipoma, Fibroma, Angioma, Myxoma, Neurofibroma†, Schwannoma†, etc.

2. **Benign (skin adnexal origin):** Epidermoid cyst, Trichilemmal (Pilar) cyst, Trichoepithelioma, Pilomatricoma, Hidradenoma, Cylindroma, etc.

3. **Malignant:** Malignancy of the above 1 and 2, such as Liposarcoma, Dermatofibrosarcoma, Leiomyosarcoma, Angiosarcoma, Pilomatrix carcinoma, and secondary Metastasis, etc.

†= nerve-sheath tumor.

Case presentation

An otherwise well, 17-year-old male presented with a painless solitary lump on the right chest wall of 3 years' duration. He reported that it had recently grown, causing discomfort dur-

ing contact sports and an unattractive appearance. Clinical examination revealed a nontender subcutaneous lump obliquely overlying the right anterolateral chest wall (as shown in Figure 1). The lump was felt firm, and the inferior part could be moved from side to side. Based on location of trunk with limited clinical cues, epidermoid cyst, lipoma, and less commonly, fibroma, schwannoma, neurofibroma, angioma, were considered for the differential diagnoses. Malignancy of the above such as dermatofibrosarcoma, liposarcoma, leiomyosarcoma, and also secondary metastasis were also impossible to exclude here without further workup.

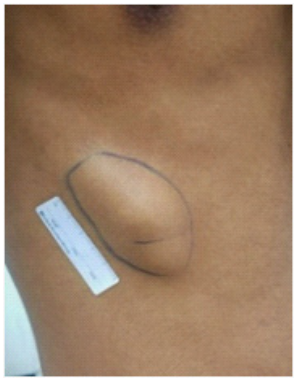

Figure 1: Chest-wall lump.

Investigation and management

Although diagnosis of certain lumps such as lipoma and epidermoid cyst (with punctum) can be made clinically, ultrasonography is useful as a next step non-invasive tool for confirmation of common lumps (lipoma or cyst), and also to be able to appreciate the size, attachment, and vascularity of the lump prior to procedure [6]. However, ultrasonography was unable to confirm lipoma or cyst in this case. Report was just a non-specific solid heterogeneous mass with well-defined margins measuring 76 mm × 26 mm × 18 mm, and not connected to ribs. Punch biopsy report was inconclusive.

What are next steps? It would depend on individual primary care practitioners such as a straight forward referral to a surgeon, or proceeding further investigations with +/- necessary management if one felt comfortable with experience and facilities. Chest radiography and Computerized Tomography (CT) were not considered effective diagnostic tools in this case. Magnetic Resonance Imaging (MRI) is a valuable tool for evaluation of soft tissue lumps, but it is not readily accessible. Therefore, procedure such as core, incisional or excisional biopsy can be postulated [7,8]. If core biopsy (+/-sonography guidance) facility is unavailable or unfamiliar to practitioner, incisional biopsy or excising the whole lump to avoid replicated procedures, can be attempted. Procedure performed under local anesthesia, the lump was able to be removed entirely, following undermining from distal part and ligation of its proximal attachment to prevent arterial bleeding from the neurovascular bundle. The mass looked banana or boat shape with a smooth light-yellow surface (Figure 2). Histopathology analysis revealed schwannoma (Figure 3). Figure 4 is a final closure of the skin, following inner-layer suture. The patient had no associated masses in the chest or any other part of the body. He was followed up for 2 years with no postsurgical sequelae or recurrences.

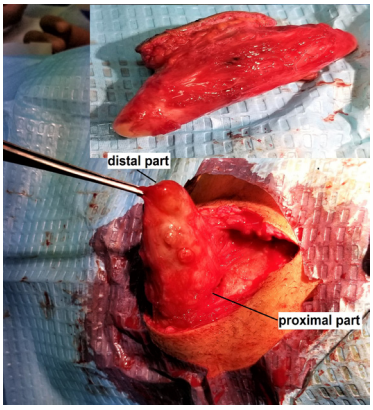

Figure 2: Dissection of Schwannoma and its shape.

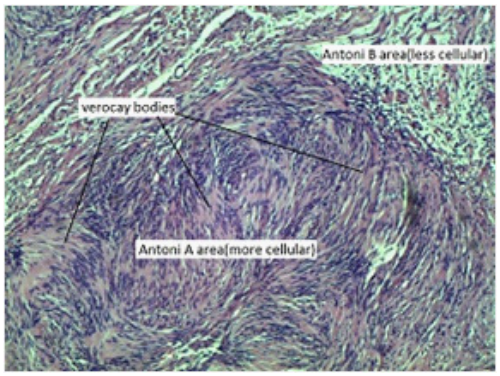

Figure 3: Histology of Schwannoma (H&E x100).

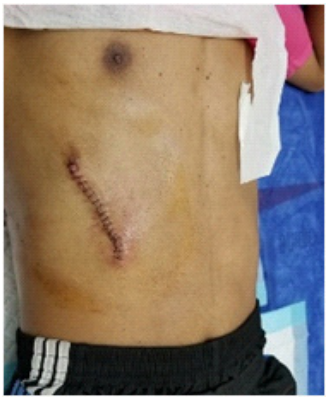

Figure 4: Final closure of the skin.

Discussion

Schwannomas (neuromas, neurilemmomas) are sporadically encountered benign tumors that arise from the sheath (Schwann cells) of peripheral nerves. They can manifest as lumps under the skin with lateral mobility from its stalk. They can also appear as a mass in the body cavities, if it is originated from phrenic or vagus nerve [9]. A comprehensive epidemiology of schwannomas is limited except for the vestibular schwannoma (acoustic neuroma) [9]. There is no predilection of gender or ethnicity for schwannoma, but age prevalence has been variably reported in the literature [10-12]. Our 17-year-old patient, noticed the tumor at 14 years of age, is likely to be the youngest reported case so far. Associated neurofibromatosis or schwannomatosis can be queried at the presence of bilateral or multiple schwannomas over the body but majority of schwannoma are solitary [10].

In regard to investigation, ultrasonography remains useful as described above, although it cannot adequately address the diagnosis of all soft-tissue lumps [6]. To be mindful, the use of punch biopsy for subcutis lumps may yield a false-negative report from inadequate tissue sampling, and is generally discouraged [13]. CT or MRI can be considered depending on nature of lump, location, and accessibility with cost. Core, incisional or full excisional biopsy are favored for tissue diagnosis of subcutis lumps [7,8].

This schwannoma extending downward 70 mm originated from the lateral branch of the right sixth intercostal nerve. It is important to be aware of chest-wall (intercostal) schwannoma protrusion through intercostal muscles and its proximal attachment of neurovascular bundle. The artery in the proximal attachment needs to be secured properly to minimize or avoid bleeding which can lead to large hematoma formation or even hemothorax [14]. It is suggested to start undermining at the distal portion of the tumor to enable it to be deflected upward to visualize its proximal attachment structure.

Conclusion

If a lump is unlikely lipoma or epidermoid cyst, differential diagnoses can span other mesenchymal, skin-adnexal, and nerve-sheath tumors. When a schwannoma or soft-tissue lump is large enough to cause compression or aesthetic concern, surgery is a definitive treatment. Excision of certain lumps can be performed under local anesthesia. Complex or larger-sized cases are recommended to be managed at the well-equipped hospitals.

Declarations

Acknowledgement: Authors are grateful to Dr Shahin Sharifi MD, FRCPA, Pathologist of Infinity Pathology, Brisbane, QLD, Australia for the histology picture.

Ethics approval: Not applicable.

Disclosure: The authors have no funding and no conflict of interest.

References

1. McTighe S, Chernev I. Intramuscular lipoma: A review of the literature. Orthop Rev (Pavia). 2014; 6: 5618.
2. Chandrasekaran V, Parkash S, Raghuveer CV. Epidermal cysts – A clinicopathological and biochemical study. Postgrad Med J. 1980; 56: 823-827.
3. Beaman FD, Kransdorf MJ, Andrews TR, Murphey MD, Arcara LK, Keeling JH, et al. Superficial soft-tissue masses: Analysis, diagnosis, and differential considerations. Radiographics. 2007; 27: 509-523.
4. Pujani M, Madaan GB, Jairajpuri ZS, Jetley S, Hassan MJ, Khan S. Adnexal Tumors of Skin: An Experience at a Tertiary Care Center at Delhi. Ann Med Health Sci Res. 2016; 6: 280-285.
5. Dermnet NZ. Adnexal tumour. Hamilton, NZ: Dermnet NZ 2017; Available at www.dermnetnz.org/topics/adnexal-tumour/ [accessed 15 Feb 2022].
6. Church DJ, Krumme J, Kotwal S. Evaluating Soft-Tissue Lumps and Bumps. Mo Med. 2017;114: 289-294.
7. Stevenson P, Rodins K. Improving diagnostic accuracy of skin biopsies. Aust J Gen Pract. 2018; 47: 216-220.
8. Knight DM, Birch R, Pringle J. Benign solitary schwannomas: A review of 234 cases. J Bone Joint Surg Br. 2007; 89: 382-387.
9. Inzirillo F, Giorgetta C, Ravalli E. Nerve-sparing schwannoma removal from two infrequent origins. Asian Cardiovasc Thorac Ann. 2015; 23: 493-495.
10. Sheikh MM, De Jesus O. Schwannoma. [Updated Aug 26, 2020]. In: StatPearls. PMID: 32965983. Available from: www.ncbi.nlm.nih.gov/books/NBK562312/ [accessed 15 Apr 2022].
11. Dickey ID, Floyd JG. Neurilemmoma (Schwannoma). [Updated Oct 08, 2020]. In: Medscape. Available from: Emedicine.medscape.com/article/1256405-overview#showall [accessed 15 May 2022].
12. Galukande M, Khingi A. Chest wall schwannoma presenting as a solitary malignant lesion: A case report. Springerplus. 2016; 5: 1549.
13. Leffell DJ, Brown MC. Punch biopsy: Skin biopsy. In: Manual of skin surgery- A practical guide to dermatologic procedure. 2nd edn. People's Medical Publishing House-USA. 2011; 56.
14. Morimoto J, Nakajima T, Iizasa T, Ishikawa A, et al. Successful resection of schwannoma from an intercostal nerve causing bloody pleural effusion: Report of a case. Surg Today. 2011; 41: 989-991.