CASE REPORT

GANGLION CYST IN THE ROOT OF THE LEFT INDEX FINGER

R. Manoj¹, D. Prem Charles², E. Shyamala³, R. Ramesh⁴, P. Viswanathan⁵

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ABSTRACT: Ganglion cyst is a condition where there is herniation of synovium from the joint space to the exterior and presents as a cystic mass. The cyst can maintain the connection to the joint space. There is potential risk of injury and infection due to even a trivial trauma leading to complications like arthritis and septicemia. The ganglion cysts normally observed in major and weight bearing joints. The incidence in small joints are uncommon. The present patient presented with a cystic lesion in the root of the left index finger.

KEYWORDS: Ganglion cyst, Left index finger.

INTRODUCTION: Ganglion cysts are multiloculated cystic lesion around major joints and weight bearing joints; most commonly observed around second to sixth decades of life with a slight male preponderance. They maintain connection in to the joint space and potentially can precipitate arthritis, if traumatized or inflamed.

CASE SUMMARY: A 45years old female presented with a cystic lesion in the root of the left index finger of one year duration. She is a right handed person and a home maker. The cyst was 1cm×1cm in size, vaguely translucent. The same was excised and histologically found to be Ganglion cyst.

MACROSCOPY (FIG. 1): Grey white cystic structure measuring 0.5cm in diameter. On cut section white colored gelatinous material expelled out.

MICROSCOPY: Section studied shows cystic space lined by flattened cells and the cyst was multiloculated (FIG. 2). The cyst wall is composed of fibro-collagenous tissue (FIG. 3) along with scanty inflammatory cell infiltrate (FIG. 5). There are myxoid areas present in the cyst wall (FIG. 4 & 6). Histological features were consistent with the diagnosis of Ganglion cyst.

DISCUSSION: Ganglion cysts are probably the herniation^{1,2} of the joint capsule which occurs around the weight bearing joints. They are multiloculated and maintain the connection with the joint space.³ Cysts are normally sterile and filled with clear to weak gelatinous fluid depending on the protein content. Ganglion cysts develop by myxoid degeneration and cystic softening of the connective tissue of the joint capsule or tendon sheath.^{4,5}

Ganglion cysts usually develop in the dorsum of the wrist and less frequently in the wrist flexors, fingers, dorsum of foot, knees, spine, ankle and other sites.⁶

Grossly the Ganglion cysts consists of several interconnecting: a main cyst communicates via multiple pseudopodia with several small capsular cysts.⁷

Microscopically the walls of the Ganglia consists of fibrous tissue, containing variable number of fibroblasts without a true synovial cell lining.^{8,9} The collagenous wall of Ganglia may contain a

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variable proportion small foci of mucoid or myxoid degeneration, focal histiocytes, hemosiderin deposits, calcification and thick walled small vessels.^{10,11}

The treatment depends on clinical symptoms, location and evolution of the lesion. Aspiration of the cyst or followed by intra-articular steroid injection could be done, when conservative therapy fails, radical surgical therapy is indicated.

In differential diagnosis one can consider synovial cysts caused by degenerative changes in the connective tissue resulting in disintegrating cystic cavities. Synovial cysts lined by flattened or cuboidal synovial cells. Their walls consist of more or less dense fibrous tissue. The importance of the Ganglion cyst is associated with the articular abnormalities such as rheumatoid arthritis, osteoarthritis, trauma and pigmented villonodular synovitis^{12,13} and hence excision biopsy is recommended for diagnosis and management.

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MACROSCOPIC PICTURES: SITE AND SPECIMEN

**SUTURED WOUND AFTER
EXCISION OF GANGLION**

FIG. 1: SPECIMEN FOR BIOPSY

MICROSCOPIC PICTURES: H & E SECTIONS

FIG 2: 4X

FIG 3: 10X

FIG 4: 40X

Fig. 2: Multiloculated cyst lined by flattened cells.

Fig. 3: cyst wall composed fibrocollagenous tissue with myxomatous change.

Fig. 4: Myxomatous change cyst contains proteinaceous material.

FIG 5: 10X

FIG 6: 40X

Fig. 5: Myxomatous tissue contains few scattered inflammatory cells predominantly composed of lymphocytes as a rare clump in the wall.

Fig. 6: Loose edematous Myxomatous tissue.

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AUTHORS:

1. R. Manoj
2. D. Prem Charles
3. E. Shyamala
4. R. Ramesh
5. P. Viswanathan

PARTICULARS OF CONTRIBUTORS:

1. 3rd Year Post Graduate, Department of Surgery, Rajah Muthiah Medical College, Annamalai University.
2. 3rd Year Post Graduate, Department of Pathology, Rajah Muthiah Medical College, Annamalai University.
3. 2nd Year Post Graduate, Department of Pathology, Rajah Muthiah Medical College, Annamalai University.
4. Professor, Department of Surgery, Rajah Muthiah Medical College, Annamalai University.

5. Professor, Department of Pathology, Rajah Muthiah Medical College, Annamalai University.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. P. Viswanathan,
Professor, Department of Pathology,
Faculty of Medicine,
Rajah Muthiah Medical College,
Annamalai University,
Chidambaram-608002,
Tamilnadu, India.
E-mail: drpviswanathan2013@gmail.com

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