Incidental Fine Needle Aspiration Cytology (FNAC) diagnosis of primary Hydatid cyst in Axillary region - A rare case report in unusual location

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ABSTRACT

Hydatid cysts develop most frequently in the liver and lungs, but are occasionally found in other organs. Solitary subcutaneous hydatid cyst is uncommon and the only symptom is generally a silent growing mass. Primary hydatid cysts in the axillary region are extremely rare even in areas where the disease is endemic, with only eighteen cases reported in the literature.(1,9)

We have reported a case of asymptomatic subcutaneous axillary swelling in a young female incidentally diagnosed on FNAC. This case report emphasises that the possibility of hydatid cysts should be considered as cause for palpable lesions in axillary region especially in endemic locations.

Key words: axillary region, echinococcus, hydatid cyst, subcutaneous

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INTRODUCTION

Hydatid disease still represents an important medical and surgical problem. Though most common species is Echinococcus granulosus , but Echinococcus multilocularis and Echinococcus garthus also infest humans (1,2).Primary hydatid cysts are the result of a haematogenous dissemination of the embryos of Echinococcus granulosus, which pass through the capillary bed of the liver and lung, finally reaching more distant and atypical sites such as the kidney, orbit, heart, bone, spleen, muscle, brain, urinary bladder, chest wall, subcutaneous tissue, tibia, parotid, breast, cervicofascial region, and thyroid(3).

Subcutaneous tissue involvement is seen in only 0.5% cases. Uncomplicated hydatid disease is generally asymptomatic and usually occurs as a subcutaneous mass developing over a long period of time

.Although the disease is eradicated in most of the parts of the world, it still remains a serious endemic health problem in certain developing countries including India.[(1)]A case of a primary hydatid disease which originated in the subcutaneous tissue in the axillary region in a young female is being presented.

CASE HISTORY

A 20 year female presented with swelling in the left axillary region of 4 months duration, gradually increasing in size,not associated with pain or fever. On examination the swelling was in subcutaneous region along the anterior axillary line 6 x 6 cms, **(Figure 1)** diffuse, firm, mobile and non tender, not fixed to surrounding structures. There was no cervical lymphadenopathy. FNA was done as there was no suspicion of hydatid cyst preoperatively. FNA cytology showed hooklets in fluid and amorphous background **(Figure 2)**

Figure 1: Swelling m 6 x 6 cm in anterior axillary line.

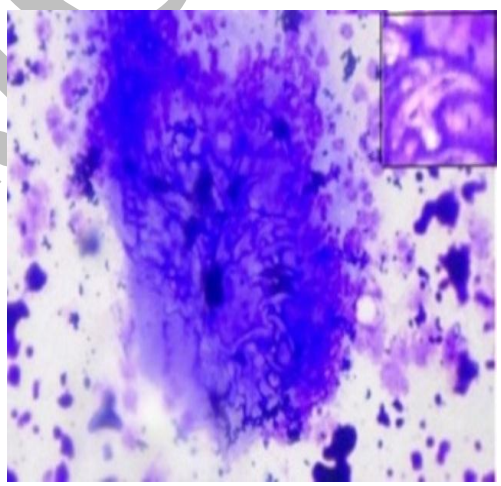

Figure 2 : FNA showing hooklets in fluid and amorphous background (HP,Geimsa)

FNAC and post procedure was uneventful. Abdominal ultrasound showed no involiver or spleen hydatid involvement. There was no evidence of intrathoracic hydatid disease was found either through chest X- ray. Casoni test and latex agglutination test was negative. Under general anaesthesia, the cyst was excised completely along with subjacent

subcutaneous tissue and sent for histopathological examination. Grossly, a pearly white cyst measuring 5 cms in diameter with numerous daughter cysts noted. **(Figure 3)**

Figure 3: Gross: Pearly white cyst m 5cms with numerous daughter cysts

Wet mount from cyst contents revealed multiple scolices. H& E sections showed pericyst containing lymphoid aggregates and follicle formation. Endocyst showed hyaline ribbon like membrane with occasional scolices. Cell block from the sediments showed numerous scolices. **(Figure 4 & 5)**

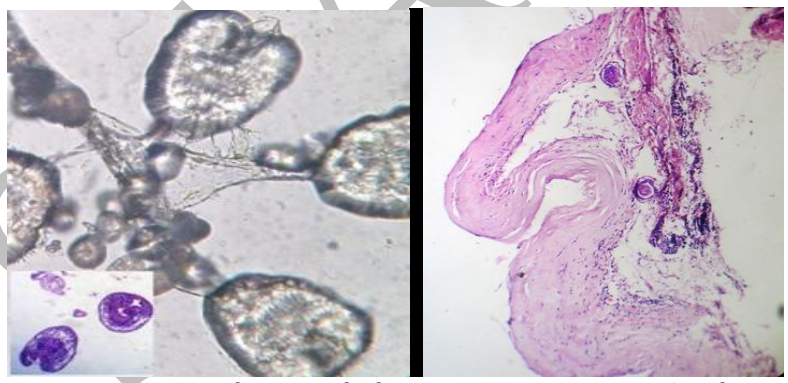

Figure 4: Wet mount : showing multiple Scolices(Inset : Cell block .H&E)

Figure 5: Pericyst & endocyst with ribbon like membrane with occasional scolices (HP,H & E)

DISCUSSION

The incidence of cystic echinococcosis is about 100,000-300,000 cases annually and occurs in all continents and in at least 100 countries.[4] Hydatid disease is endemic in India with annual incidence of 1 to 200 per 1,00,000 persons.[5]The highest prevalence of human hydatid disease in India is recorded in Andhra Pradesh, Saurashtra, and Tamil Nadu.[6]

Hydatid cysts develop most frequently (80%) in the liver. In 15% to 20% of the cases, embryo passes through the capillary systems in the liver and lungs, reaches the general circulation, and passes to all viscera and soft tissues. They may arise in atypical sites such as the orbit, urinary bladder, chest wall, subcutaneous tissue, tibia, parotid gland, breast, cervicofascial region, and thyroid.[1,7]. Occurrence of primary hydatid cyst in the axilla is extremely rare and after extensive search only eighteen cases reported in the literature till 2013 were found (Table 1) [1,8,10].

Table 1: Comparative analysis of axillary hydatid disease

Authors	Year	Age/gender	Origin of cysts	Daughter cyst	Organ involvement	Screening	Follow up
Thomson	1899	NA		Axillary	NA	NA	NA
Michel-Bechet	1963	36/F	left thoracic wall	multiple	none	CXR,LP	NA
Remignon et al	1965	75/F	Left major pectoral muscle	none	none	CXR	NA
Lamotte et al	1967	32/M	right axillary vein	multiple	none	CXR,RS	NA
Mayol Martinez et al	1994	67/F	muscles	multiple	none	CXR,US	NA

Sapunar and Bahamondes et al	1995	63/M	right humerus	multiple	none	CXR,US	NA
Zamfir et al	1997	11/F	left neurovascular bundle	none	none	CT,US	NA
Navarro Martin et al	1998	84/M	NA	multiple	none	CXR,US, CT	NA
Unal et al	2001	53/F	Right pectoral muscle	None	none	CXR,US, CT	9 mnths
Dilege et al	2003	15/F	Right axillary region	NA	pulmonary	CXR,CT	NA
Losanoff et al	2004	38/M	subcutaneous tissue	multiple	none	NA	NA
Borovik et al	2006	31/F	Left axillary	multiple	none	CXR,CT	6mnths
Haluk Recai Unalp et al	2009	48/F	left axillary region	multiple	none	CT,US	6mnths
Ozsoy et al	2011	45/F	The axillary region	none	none	CXR,US, CT	1 year
Ruso et al	2011	84/F	Cervicoaxillary region	multiple	none	CXR,US, CT	5 years
Arsalane et al	2012	43/M	left axilla	multiple	none	CXR,US,	NA

						CT	
Saylam et al	2012	36/F	Right axilla	none	none	CXR,US	17mnths
Damak et al	2012	27/F	Left axilla	none	none	CXR,US, CT	NA
Present case	2013	20/F	left axillary region	multiple	none	CXR ,USG	NA

Clinically the differential diagnosis of lesion should include hematoma, abscess, lymphocele formation, breast cancer presenting as an axillary mass, or metastatic lesions.[1] Radiologically, hydatid cysts in the axillary region can be misdiagnosed as a soft tissue sarcoma or lymphadenopathy.

Routine use of FNA cytology for the diagnosis of hydatid disease should be discouraged, yet this procedure may represent a real aid in the definitive diagnosis of clinically unsuspected hydatid cysts. Serologic tests like Latex agglutination test, IHA, indirect immunofluorescence test, enzyme-linked immunosorbent assay (ELISA), Western blotting, and polymerase chain reaction are among the most commonly used .[4]Serologic tests can confirm that the cyst is hydatid in origin and are useful for follow-up, although they can be false positive in up to 33% of cases.[8]

CONCLUSION

The possibility of hydatid cyst should also be considered in th differential diagnosis of palpable axillary masses, although rare. At present only 18 cases of primary axillary hydatid cyst is reported in the literature. Hence this case is being presented for its rarity and also since it was diagnosed on FNAC incidentally as a routine diagnostic procedure.

REFERENCES

1) Unalp HR ,Kamer E, Rezanko T , Kilic O ,Tunakan M, Onal MA. Primary Hydatid Cyst Of The Axillary Region: A Case Report.B alkan Med J.2011;28: 209-11

2) Faheem KN , Nusrath NB , Rao SS, Ram GR , Sushma C, Subramanyam Y, Ramesh K. The Scenario Of Hydatid Cyst Disease In Epidemic Areas Of Andhra Pradesh – Evaluation And Analysis.Int J Res Dev Health.2013;1(3):120 – 8

3) Bengisun U, Ozaslan C, Kutlay J, Camur A, Demirci S. Primary Hydatid Cyst Of The Breast. Eur J Surg 1983;159:503-4.

4) Rao SR, Mehra B, Narang R.The Spectrum Of Hydatid Disease In Rural Central India: An 11-Year Experience. Ann Trop Med Public Health . 2012; 5(3): 225-230

5) Parija SC. A textbook of medical parasitology. 2nd edition. All India Publishers and Distributions:Madras.2004.220-229

6) Tiwary AK, Tiwary RN. Hydatid Disease In Chotanagpur Region Of South Bihar. Indian J Surg 1988;50:14-8

7) Yagmur Y, Akbulut S. Unusual Location Of Hydatid Cysts: A Case Report And Literature Review. Int Surg 2012;97;23-6

8) Ozsoy M, Keles C, Kahya M, Keles G. Primary echinochoccal cysts in the axillary region. J Infect Dev Ctries.2011:5(11):825-827

9) Zangeneh M,Amerion M,Siadat SD,Alijani M.Primary Hydatid Cyst of the Axillary Region: A Case Report. Case Reports in Medicine.2012:1-4

10)Damak T, Triki A,Chargui R, Laamouri B, Chemlali M, et al.Hydatid cyst mimicking an axillary lymph node. La tunisie Medicale .2012;90(011): 836 – 837