A 56-year-old male from north eastern state was referred to us with complaints of pain abdomen of three-month duration. There was no associated history of fever, weight loss or development of any other lump in his body. His occupational history included exposure to water pipeline system. There was no history of jaundice or abnormal bowel movements. On clinical examination, there was hepatomegaly.

His laboratory investigations showed reduced hemoglobin (10.6 g/dl; normal = 13-17 g/dl), hematocrit, mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH) and elevated red cell distribution width (RDW). Total leucocyte count was normal. Differential leucocyte count showed increase in eosinophil percentage (16.9%; normal = 1.6-6%) and count (1.4196 × 10e 9/L; normal = 0.2-1.0 × 10e 9/L), along with increase in basophils. Platelet count was reduced (81 × 10e 9/L; normal = 150-400 × 10e 9/L). His serum glutamic oxaloacetic transaminase (SGOT), serum glutamic pyruvic transaminase (SGPT), blood urea and serum uric acid levels were normal, while serum globulin level was marginally increased (3.6 g/dl; normal = 1.7-3.5 g/dl). Tumor marker levels for α fetoprotein, carcinoembryogenic antigen (CEA) and CA19.1 were normal.

Computed tomography (CT) scan abdomen reported from elsewhere showed hepatomegaly, portal lymphadenopathy multiple, solid-cystic liver lesions that were found to be stable in terms of size and number on a repeat scan over the duration of one and half months. These were interpreted to be suggestive for metastasis. There was no lymphadenopathy or ascites.

Fine needle aspiration cytology (FNAC) liver yielded fluid-like aspirate. Prepared smears were cellular comprising several inflammatory cells including eosinophils, neutrophils and degenerate hepatocytes along with several hexagonal bipyramidal-shaped, charcot-Leyden (CL) crystals. Interspersed were several scolices with radially arranged hooklets, few scattered hooklets with translucent, refractile, triangular or sickle shapes with an inner semi-translucent core and folded membranous structures showing striations. Diagnosis of hydatid cyst was made [Figures 1 and 2].

The patient was offered albendazole 400 mg (TDS) for 28 days and has been asymptomatic thereafter for nine months.

The patient denied any allergic reaction subsequent to the procedure.

Hydatid cyst (cystic echinococcosis) in humans is caused mostly by the larval or cyst stage of *Echinococcus granulosus* and uncommonly *Echinococcus multilocularis*. It most commonly affects liver and lungs, followed by other body sites, including soft tissues. Fine needle aspiration cytology (FNAC) is a useful technique for identification of these organisms, including in cases where there is a low index of suspicion for this lesion, over malignancy, as noted in the present case, who was clinicoradiologically suspected with multiple metastatic lesions in his liver. Even in the earlier reports, rarely any case was clinically suspected with hydatidosis. FNAC smears unraveled spectrum of cytomorphological features of hydatidosis, including presence of scolices, hooklets, lamellated wall, eosinophils and charcot-leyden (CL) crystals, the latter feature rarely documented in the cytological description of this parasitic lesion. Despite
There have been instances where this lesion was mistaken for a malignancy, including cases of soft tissue hydatidosis that clinically mimicked as malignant tumors.\[6\]

An index of suspicion is necessary while evaluating such cases, especially the present case, where occupational history indicated possible exposure. Cytomorphological features helped in clinching the diagnosis. Subsequently, the patient was relieved of his anxiety and has been asymptomatic after he completed a course of antihelminthics.

To sum up, this case reinforces value of FNAC as an extremely useful, cost effective and safe technique in evaluating parasitic lesions, including hydatidosis, especially when they get referred as clinically “malignant” to cancer centers, where there is a relatively higher index of suspicion for a malignancy. Identification of spectrum of cytological features on aspirates, as noted in the present case can obviate need for a biopsy confirmation.
Rekhi: Cytomorphological spectrum of hydatidosis

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