

# Role of Computed Tomography of Hydatid Cyst in Pancreas

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**Abstract:** *Hydatid cyst (HC). 30 confirmed human cases of Hydatid cyst, 25 patients with other parasitic infections and 15 clinically healthy Patients were used to evaluate the diagnostic value of Hydatid cyst by Ultrasound and CT Scan.*

**Keywords:** Hydatid cyst in KSA, CT hydatid cyst

## 1. Introduction

Hydatidosis is a disease caused by infection with the metacestode stage of the dog tapeworm, *Echinococcus granulosus*. The disease represents a significant public health problem in several North Africa and Middle East countries. Several studies indicated that hydatid disease is an endemic zoonosis in the Kingdom of Saudi Arabia (KSA) affecting both humans and their domestic animals.

There is usually no direct parasitological evidence for the presence of cysts in organs or tissues and in most cases the early stages of infection are asymptomatic. Over the last decade diagnosis of hydatid disease was improved due to the use of imaging techniques including ultrasonography, computed tomography (CT scanning) and magnetic resonance imaging (MRI) supported by immunological assays for confirmation of clinical diagnosis.

## 2. Materials and methods

**Hydatid cysts were obtained from 20 Patient , Kingdom of Saudi Arabia. Alqassim City using CT Scan and Serum samples for the present study were collected from 17 surgically confirmed human cases with Hydatid cysts (group A).**

Control sera were obtained from 15 patients with parasitic infections other than *E. granulosus* (group B), and from 10 clinically healthy subjects with no history of living in endemic areas and free from parasitic infections (group C). Group B, consisted of 5 cases with amoebic liver abscesses, 3 cases with ascariasis, 3 cases with schistosomiasis, 1 cases with fascioliasis, 1 cases with cysticercosis and 2 cases of ancylostomiasis.

## 3. Discussion

The present work is one of the first studies in Saudi Arabia to analyze protein extracts of HCF collected from infected camels and sheep using SDS-PAGE and EITB techniques to identify their antigenic fractions and compare the diagnostic

values of these fractions. Sera samples from surgically confirmed hydatidosis cases were used for identifying antigenic determinants in HCF which are unshared with control sera samples (patients with other parasitic infections and clinically healthy individuals).

Immunoblotting results identified 11 major discrete antigenic fractions (110–8 kDa) in HCF preparations from camel and sheep. Our data are in agreement with those obtained by another group (Kanwar et al., 1992); they reported that sera from surgically confirmed cases of hydatidosis reacted with 12 polypeptides with molecular weights of 8–116 kDa by Western blotting using hydatid antigens from sheep.

In the present study, sera of the studied groups showed some variations in recognizing the 11 detected protein fractions (110–8 kDa) between HCF preparations from camel and sheep. Though, the cluster of bands at 45–40 kDa was one of the most frequently recognized bands by CE cases (94%), this in addition to absolute specificity with HCF camel extracts. It was detected by only 77% sensitivity and 84% specificity with HCF sheep extracts.

## 4. Results

The 17 confirmed hydatidosis cases (group A) recognized at least 15 by Ultrasound and CT Scan. Some patients with other parasitic diseases (group B) showed also by US and CT Scan. And from clinically healthy individuals (group C) did not show any features of cystic diseases.

## 5. Conclusion

Cystic Echinococcosis is a disease of the middle aged. Ultrasonogram combined with CT Scan is the best diagnostic tool available for abdominal echinococcosis allowing diagnosis,. The recommended treatment is endocystectomy with antihelminthic therapy. But the problem of early detection of echinococcosis in endemic areas needs attention by workers as this approach can

potentially prevent the devastating complications due to this disease.

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