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ULTRASONOGRAPHY IN BILIARY ASCARIASIS AN EXPERIENCE OF 20 CASES

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ABSTRACT

Objective: To asses the efficacy of ultrasound in diagnosis of biliary ascariasis
Study Design: Cross sectional, descriptive study.
Place and duration: Department of Radiology Saidu Group of Teaching Hospitals, Saidu Sharif, Swat. From 1st Jan 2011 - 31 Dec 2011.
Patients and method: All patients with ultrasound findings of biliary ascariasis were included in the study. A proforma was filled for each patient and each patient was followed in the wards, they were admitted. Follow up ultrasound was done for those patients who were treated conservatively.
Results: Out of 20 patients, 60 %(n=12) were males and 40 %(n=8) were females. Sixty five percent were below 15 year of age. Nine patients were operated while 11 were treated conservatively.
Conclusion: Biliary Ascariasis is common in District Swat and Ultrasonography is an effective noninvasive method of diagnosis.
Key words: Ultrasonography, biliary ascariasis, Radiology.

INTRODUCTION:

Ascaris Lumbricoides or round worm is the most common nematode in the human gastrointestinal tract.[1] Ascariasis occurs globally.[2] It is most common in tropical and sub-tropical countries where environmental conditions are optimal for maturation of ova in the soil.[2,3] Ascaris lumbricoid infect 25% of the world population and 20000 death per year occur due to this[4,5] Mostly people from lower socioeconomic groups living in unhygienic conditions are affected.[6] Ascaris Lumbricoides is 25-35 cm long as adult worm and can live for 12-18 months.[2,5] Most individuals with worms in the intestine follow a benign course with no signs and symptoms[1,2] but because of the wanderlust of the worms and their tendency to explore orifices, ducts and cavities the parasite can enter the biliary duct and cause biliary colic and other complication.[6,7] As the signs and symptoms of biliary Ascariasis has many differential diagnosis, the diagnosis of biliary ascariasis usually depends on the demonstration of worms in the biliary tract by different imaging techniques.[6] Ultrasonography is noninvasive and have been shown to have high diagnostic accuracy[6,8,9]. The ultrasonic appearance has been described in detail. The characteristic appearance is single or multiple echogenic non-shadowing linear or curved strips with or without a central sonolucent line.[5,10,11]

Material and methods:

Design: Cross sectional, descriptive study

Place and duration: This cross sectionnal, descriptive study was carried out in Department of Radiology Saidu Group of Teaching Hospital, Saidu Sharif, Swat. From 1st Jan 2011 - 31Dec 2011.

Patients and method: All patients with typical sonographic findings of ascaris lumbricoides in biliary tract were included in the study. A proforma was filled for each patient after informed consent. Each patient was followed in the wards where they were admitted. Those patients who were operated, their peroperative findings were recorded in the

proforma. Follow up ultrasound was done for each of the patient who was treated conservatively.

Results: Out of 20 patients, 60 % (n=12) were males and 40 % (n=8) were females. Sixty five percent of patients were below 15 year of age. Three (15%) patient were above 50 years of age. Nine (45%) of patients were operated while 11 (55%) were treated conservatively. In 16 (80%) of patients single worm was present only in common bile duct (CBD) while in 4 (20%) multiple worms were present in CBD, gall bladder and hepatic duct. Eighteen patients were from poor socioeconomic group while 2 were average. No patient belonged to high socioeconomic group.

Table 1: Percentage of male and female

Total	20	Percentage
Male	12	60%
Female	8	40%

Table2: Distribution of age patients with biliary ascariasis

Age	Below 15 year	16-30 years	30-50 years	Above 50 years
No. of patients	15	2	0	3
Percentage	75%	10%	0%	15%

Discussion:

Our ultrasound findings were similar to other studies.[10,11,12] In all the 9 patients (45%) who underwent surgery single or multiple worms were removed from biliary tract and the findings were consistent with sonographic findings. Those patients, treated conservatively, follow up ultrasound was used to confirm the diagnosis as used in many other studies.[11,12,13]

In our study, follow up ultrasound showed normal biliary tract in all the cases .As in other studies efficacy of sonography in our study was also 100%.[8,9,11,14] consistent with sonographic findings. Those patients, treated conservatively, follow up ultrasound was used to confirm the diagnosis as used in many other studies.[11,12,13] In our study, follow up ultrasound showed normal biliary tract in all the cases. As in other studies efficacy of sonography in our study was also 100%[8,9,11,14] Sania FM and Schulman A in their studies report 25-91% sensitivity.[3,15] This may be because the sensitivity is lower in those with pancreatic disease.[3] In our study most of the patients were below 15 years of age while in most of the studies the mean age is around 30-40 years. [4,6,10] Similarly as compared to other international studies males were more than females in our study. [6,7] This is the 1st study in this area and further studies may find out the cause for this. Eighty percent of the worms in our study were in common bile duct as reported in other studies also.[9,11] Fifty five percent of the patients responded to conservative treatment. Higher rates for conservative treatment have been reported.[6]

Conclusion:

Biliary Ascariasis is a common problem in this part of the world and it should be considered in the differential diagnosis of any patient with signs and symptoms of biliary tract disease.

Ultrasonography is an effective noninvasive method of diagnosis.

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