

## Letter to the Editor / Editöre Meküp

### Hepatic Hydatid Cyst Cases

Karaciger Kist Hidatik Olgularımız

2008;25:95-9

Dear Editor,

We read with great interest the article by Albayrak et al.<sup>[1]</sup> entitled "Hepatic hydatid cyst cases". In this retrospective study, medical records of four patients who underwent urgent surgery due to intraperitoneal rupture and the records of 40 patients treated for hepatic hydatidosis were analyzed. Postoperative biliary leakage into the cyst cavity was observed in 15 patients. The authors reported that their rate of biliary leakage was higher than the published data in the literature. They speculated that this high rate was due to complex patients being referred to their clinic from secondary medical centers. The authors stressed that despite high complication rates such as bleeding intraabdominal abscess, biliary leakage and infection of surgical area, current therapeutic modality is still surgical intervention in the treatment of hepatic hydatid disease.

Cystic echinococcosis is actually one of the major specific public health problems in Turkey, especially in the Thrace region. Any study on this disease in the region is thus of interest, if it has a well-defined objective and if it is based on a sound methodology. The study presented in this paper is based on the analysis of a relatively high number of operated cases. However, we are not convinced that the objective was very clear. Because the title of this study was "Hepatic hydatid cyst cases" and authors declared that the aim of this study was to review treatment results of their patients. However, they did not mention other therapeutic alternatives of the disease except surgery. Moreover, they did not write including and excluding criteria of the selected

patients. The authors are right in saying that surgery is an important modality in the treatment of hepatic hydatid disease. However, after the study of Gil-Grande et al.,<sup>[2]</sup> presented in Lancet in 1993, medical treatment with albendazole had been accepted as a serious alternative to the surgical treatment for the hepatic hydatid disease. On the other hand, percutaneous drainage of the hepatic hydatid cysts under ultrasound view is performed with high success rates in modern radiology clinics.<sup>[3]</sup>

Our biggest concern with this manuscript is about the speculated high rate of biliary leakage. We think that the authors could not associate their complex patient population and the high rate of biliary leakage without statistical evaluation. If only the authors have used some statistical methods to reach to this important estimation. Albayrak et al.<sup>[1]</sup> suggested albendazole administration after the operation to prevent recurrence. Whereas, most of authors declared that albendazole should be administered five days before the operation for the safety of intervention.<sup>[4,5]</sup> On the other hand, the authors presented that endoscopic sphincterotomy has been an effective treatment method for biliary fistula after hydatid cyst surgery. It should be considered that somatostatin analogues are good medication for the biliary fistulas in terms of decreased duration of hospitalization, requirement of endoscopy and complication rates and cost effectiveness.<sup>[6]</sup>

Best regards

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## REFERENCES

1. Albayrak D, Sezer YA, İbiş AC, Yağcı A, Hatipoğlu AR, Coşkun İ. Karaciğer kist hidatik olgularımız. Trakya Univ Tip Fak Derg 2008;25:95-9.
2. Gil-Grande LA, Rodriguez-Caabeiro F, Prieto JG, Sánchez-Ruano JJ, Brasa C, Aguilar L, et al. Randomised controlled trial of efficacy of albendazole in intra-abdominal hydatid disease. Lancet 1993;342:1269-72.
3. Livraghi T, Bosoni A, Giordano F, Lai N, Vettori C. Diagnosis of hydatid cyst by percutaneous aspiration: value of electrolyte determinations. J Clin Ultrasound 1985;13:333-7.
4. Tsimoyiannis EC, Siakas P, Moutesidou KJ, Karayianni M, Kontoyiannis DS, Gossios KJ. Perioperative benzimidazole therapy in human hydatid liver disease. Int Surg 1995;80:131-3.
5. İnan M, Ayvaz S, Baser M, Karaayvaz M, Ciftci A, Hatipoglu AR, et al. Hepatic hydatid disease in children and adults living in different areas in Turkey. Saudi Med J 2007;28:555-8.
6. İnan M, Başaran ÜN, Ayhan S, Aydiner Ç, Ayvaz S. Çocuk yaş grubu kutanöz safra fistüllerinde somatostatinin yeri. Trakya Univ Tip Fak Derg 2001;18:197-9.

*Author's reply,*

Dear Editor,

We recently published an article, which has been commented on by İnan et al., reporting about different therapeutic alternatives of liver hydatid disease.<sup>[1]</sup> The aim of our published study was retrospective evaluation of the treatment results of our cases with liver hydatid disease according to the surgical point of view of our department which also states why the other therapeutic alternatives except surgery in liver hydatid disease are obviously beyond the scope of our study.

Management of liver hydatid disease is a really sophisticated subject which contains a lot of controversial issues including not only the therapeutic algorithm of the liver hydatid disease, patient selection criteria for surgery, antihelminthic therapy alone or combined with any other invasive treatment modalities, or percutaneous needle aspiration, injection, reaspiration (PAIR), management of post-surgical biliary fistula through somatostatin analogues and/or endoscopic interventions, criticized by İnan et al., but also the diagnostic value of different modalities for liver hydatid disease, sensitivity and specificity of diagnostic serologic tests, staging algorithms, scolicidal agents, therapeutic approach and follow-up criteria of asymptomatic cases, management of complicated cases, acceptability of more radical surgical procedures including pericystectomies, segmental hepatectomies and even liver transplantations, management strategies of recurrent diseases, follow-up tools after definitive treatment, ... etc.<sup>[2-5]</sup>

Not only 5 days ago, but 8 to 12 weeks prior to surgery, albendazole administration was recommended in the literature in order to prevent recurrences which we also have been trying to integrate into our clinical routine since last year.<sup>[6,7]</sup> Medical therapy alone is considered to be ineffective when the criterion of success is defined as the disappearance of the lesion.<sup>[8]</sup> A systematic review by Dziri et al.<sup>[2]</sup> allowed us also to conclude that chemotherapy is not the ideal treatment for uncomplicated hydatid cysts of the liver when used alone (level II evidence, grade B recommendation). According to the same review, the level of evidence was too low to help decide between radical or conservative treatment (level IV evidence, grade C recommendation) and percutaneous drainage associated with albendazole therapy is safe and efficient in selected patients (level II evidence, grade B recommendation). The level of evidence is low concerning treatment of complicated cysts.<sup>[2]</sup> We also should add that unlike most of the surgical series there is a lesion selection bias in percutaneous therapy. Most of the series reported in the literature have used a selection bias and performed therapy on lesions that are predominantly fluid and nonruptured.<sup>[9]</sup> Although PAIR seems to be an attractive treatment option for uncomplicated cysts, we were unable to refer selected patients because of the absence of an interventional radiology department in our institution during the study period. We agree with Emre et al.<sup>[9]</sup> that surgery combined with chemotherapy using various technical approaches (including laparoscopic surgery) remains the gold-standard therapeutic modality for echinococcal liver disease.

Surgery was defined as the only definitive and curative modality by the WHO informal working group.<sup>[9]</sup> Furthermore, according to some surgical groups, radical surgery is the optimal treatment for liver hydatid disease.<sup>[10]</sup> Although PAIR has gained worldwide popularity in the treatment of echinococcal liver disease for years, Sakaguchi et al.<sup>[11]</sup> reported interestingly the first case with liver hydatid cyst treated percutaneously in Japan in year 2007.

We absolutely agree with Tekant et al.<sup>[12]</sup> that endoscopic sphincterotomy should be the first-line treatment for postoperative external biliary fistula related to hepatic hydatid disease. We believe that lowering the distal pressure of the bile duct is the easiest and fastest way to cope with any kind of biliary fistula that do not response to conservative management. Geenen et al.<sup>[13]</sup> noted the normal common bile duct pressure to be  $10\pm2$  mmHg and the basal sphincter of Oddi pressure to average  $18\pm3$  mmHg. The common bile duct to duodenum pressure gradient was found to be  $10\pm1$  mmHg.<sup>[14]</sup> According to pressure gradients, in an intact ductal system, bile flows along an open fistula tract following the path of least resistance. After sphincterotomy the mean basal sphincter of Oddi pressures decreases to  $1\pm1$  mmHg favoring the prograde flow of bile into the duodenum rather than into the fistula tract.<sup>[13]</sup> These pressure changes obviously show the rationale of endoscopic treatment.

Using somatostatin analogues in selected cases may be helpful in postoperative biliary leaks according to some case reports in the literature. Unfortunately, we do not agree with the statements of the commenters about the advantages of somatostatin use due to lack of randomized, controlled studies comparing somatostatin analogues with endoscopic treatment for biliary leaks or fistulas following echinococcal liver surgery.

Although not statistically proven, our series of echinococcal liver disease with 4 (9%) intraperitoneal ruptured cysts treated under emergency conditions, 3 (7%) with previous history of cholangitis high probable due to intrabiliary

rupture of liver hydatid cyst, 8 (18%) recurrent cases following surgical intervention performed elsewhere, 18 (41%) cases disease with multiple cysts, a mean cyst size with 100 mm (between 50-220 mm), 9 (20%) cases with history of previous upper gastrointestinal tract or liver surgery may be informative about the complicated characteristics of the cases in our series.

We found the proposal from Rozanes et al.<sup>[8]</sup> worthwhile that evidence based and patient tailored new algorithms which directs the patients with lesions which are unsuitable for PAIR to surgery (if they are symptomatic, have complicated lesions or have lesions that are prone to rupture), the asymptomatic patients with uncomplicated lesions to medical therapy, and medical therapy failures are redirected to surgery. Recently, the establishment of the interventional radiology department in our institution encouraged us to integrate a similar algorithm into our clinical routine of our department in very near future.

Best regards

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## REFERENCES

1. Albayrak D, Sezer YA, İbiş AC, Yağcı A, Hatipoğlu AR, Coşkun İ. Karaciğer kist hidatik olgularımız. Trakya Univ Tip Fak Derg 2008;25:95-9.
2. Dziri C, Haouet K, Fingerhut A. Treatment of hydatid cyst of the liver: where is the evidence? World J Surg. 2004;28:731-6.
3. Nasseri Moghaddam S, Abrishami A, Malekzadeh R. Percutaneous needle aspiration, injection, and reaspiration with or without benzimidazole coverage for uncomplicated hepatic hydatid cysts. Cochrane Database Syst Rev 2006;(2):CD003623.
4. Goksoy E, Saklak M, Saribeyoglu K, Schumpelick V. Surgery for Echinococcus cysts in the liver. Chirurg. 2008;79:729-37. [Abstract]
5. Buttenschoen K, Carli Buttenschoen D. Echinococcus granulosus infection: the challenge of surgical treatment. Langenbecks Arch Surg 2003;388:218-30.

6. Arif SH, Shams-Ul-Bari, Wani NA, Zargar SA, Wani MA, Tabassum R, et al. Albendazole as an adjuvant to the standard surgical management of hydatid cyst liver. *Int J Surg* 2008. [Epub ahead of print]
7. Bildik N, Cevik A, Altintas M, Ekinci H, Canberk M, Gulmen M. Efficacy of preoperative albendazole use according to months in hydatid cyst of the liver. *J Clin Gastroenterol* 2007;41:312-6.
8. Rozanes I, Guven K, Acunas B, Emre A. Cystic echinococcal liver disease: new insights into an old disease and an algorithm for therapy planning. *Cardiovasc Intervent Radiol* 2007;30:1112-6.
9. Emre A, Rozanes I, Guven K. Controversial issues in the management of echinococcal liver disease. *Turk J Gastroenterol* 2006;17:257-9.
10. Aydin U, Yazici P, Onen Z, Ozsoy M, Zeytunlu M, Kiliç M, et al. The optimal treatment of hydatid cyst of the liver: radical surgery with a significant reduced risk of recurrence. *Turk J Gastroenterol* 2008;19:33-9.
11. Sakaguchi H, Tanaka T, Marugami N, Kichikawa K, Horiuchi H, Morioka C, et al. Cystic echinococcosis in immigrant from Peru: first case treated with percutaneous treatment in Japan. *Parasitol Int* 2007;56:207-10.
12. Tekant Y, Bilge O, Acarli K, Alper A, Emre A, Arioğlu O. Endoscopic sphincterotomy in the treatment of postoperative biliary fistulas of hepatic hydatid disease. *Surg Endosc* 1996;10:909-11.
13. Geenen JE, Toouli J, Hogan WJ, Dodds WJ, Stewart ET, Mavrelis P, et al. Endoscopic sphincterotomy: follow-up evaluation of effects on the sphincter of Oddi. *Gastroenterology* 1984;87:754-8.
14. Goldin E, Katz E, Wengrower D, Kluger Y, Haskel L, Shiloni E, et al. Treatment of fistulas of the biliary tract by endoscopic insertion of endoprostheses. *Surg Gynecol Obstet* 1990;170:418-23.