

Acute Opisthorchiasis in a Kazakh Man

Saule Atygaeva MD PhD¹, Francesca Cainelli MD² and Sandro Vento MD^{2,3}

¹City Adult Infectious Diseases Hospital, Astana, Kazakhstan

²Department of Medicine, School of Medicine, Nazarbayev University, Astana, Kazakhstan

³University Medical Center, Astana, Kazakhstan

KEY WORDS: Kazakhstan, opisthorchiasis, *Opisthorchis felineus*, praziquantel
IMAJ 2018; 20: 395–396

A 33 year old man was admitted to the City Adult Infectious Diseases Hospital in Astana, Kazakhstan, with abdominal pain (prevalent in the upper abdomen and in the right quadrants), asthenia, decreased appetite, and diarrhea (5 to 6 discharges of loose or watery stools a day). A rash had been noticed on the back and in the lumbar region 17 days earlier while the other symptoms had started 10 days before. Fever (38°C for 4 days) had also been present. Five days earlier, the patient had been admitted to another hospital for possible appendicitis and was found to have leukocytosis (white blood cells [WBC] $36.5 \times 10^9/L$). A liver ultrasound had shown multiple hypochoic areas, and a computed tomography scan had led to a suspicion of fascioliasis. The patient had received treatment with ofloxacin and ceftriaxone. On arrival to the City Adult Infectious Diseases Hospital, medical history revealed that the patient often fished in local rivers and lakes and consumed both cooked and raw fish marinated with vinegar. Physical examination showed pain at palpation in the right hypochondrial area and no rash. WBC count was $28.1 \times 10^9/L$ (76% eosinophils), erythrocyte sedimentation rate (ESR) 21 mm/hr, alanine aminotransferase (ALT) 51.7 IU/L (normal < 40), and aspartate aminotransferase (AST) 40.6 IU/L (normal < 37). Viral hepatitis A, B, and C markers were negative. Serum immunoglobulin M (IgM) anti-opisthorchiasis

(Opisthorchis-IgM-EIA-BEST kit, Vector-Best, Novosibirsk, Russia) was positive and *Opisthorchidae* eggs were found in the feces [Figure 1]. The patient was diagnosed with acute opisthorchiasis and treated with praziquantel 60 mg/kg single dose and prednisolone 5 mg daily. He had complete remission of symptoms, and four days later WBC were $12.3 \times 10^9/L$ (eosinophils 0.6%) and ESR, ALT, and AST levels were normal.

Opisthorchis felineus is a trematode transmissible to human beings who consume raw freshwater fish of the Cyprinidae family. The number of cases of human infection was estimated to be around 1.2 million worldwide in 1995 [1]. The prevalence is high in Russia (especially western Siberia), Byelorussia, and Ukraine. Kazakhstan is also affected [2].

Symptoms are mild or absent when the number of parasites ingested is low and infected persons do not eat raw freshwater fish regularly. However, in endemic regions of eastern Europe and central Asia, where some people eat marinated fish infected with *Opisthorchis felineus* quite regularly, more severe symptoms occur [3]. Praziquantel is a very effective therapy. If untreated, infection can become chronic, and adult flukes [Figure 2] can settle in the small intrahepatic bile ducts and live there for decades, causing chronic inflammation of the bile ducts with ensuing epithelial hyperplasia, periductal fibrosis, and bile duct dilatation. Possible complications are gallstone formation, recurrent pyogenic cholangitis, liver abscesses, and pancreatitis. *Opisthorchis viverrini* and *Clonorchis sinensis* can cause

Figure 1. Eggs of *Opisthorchis felineus* from feces (×10 magnification)

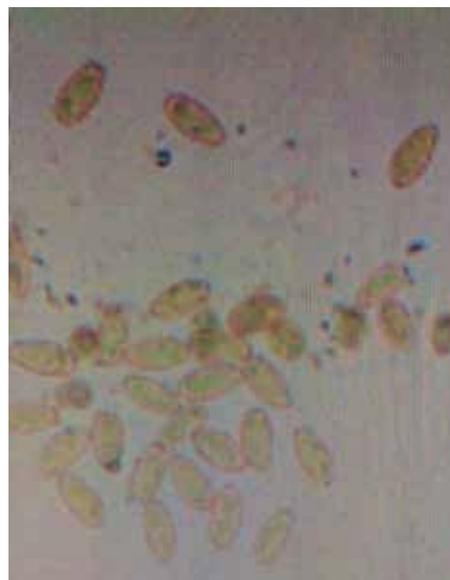


Figure 2. Adult *Opisthorchis felineus* flukes from bile (×40 magnification)



cholangiocarcinoma, but it is unclear whether the same is true for *Opisthorchis felineus*. While findings in a rodent model support this possibility [4], epidemiological evidence does not favor it [5].

Correspondence

Dr. S. Vento

Dept. of Medicine, Nazarbayev University, Astana 010000, Kazakhstan

Phone: (+7-717) 269-4654
email: sandro.vento@nu.edu.kz

References

1. Control of foodborne trematode infections. Report of a WHO study group. *World Health Organ Tech Rep Ser* 1995; 849: 1-157.
2. Beisenbieva N, Shaidarov M, Imambayeva G, Bayesheva D, Johannes HH. Chronic opisthorchiasis: current situation in the Republic of Kazakhstan. *Int J Infect Dis* 2016; 53S: 64 (abstr. 19.095).
3. Pakharukova MY, Mordvinov VA. The liver fluke *Opisthorchis felineus*: biology, epidemiology and carcinogenic potential. *Trans R Soc Trop Med Hyg* 2016; 110: 28-36.
4. Gouveia MJ, Pakharukova MY, Laha T, et al. Infection with *Opisthorchis felineus* induces intra-epithelial neoplasia of the biliary tract in a rodent model. *Carcinogenesis* 2017; 38: 929-37.
5. Fedorova OS, Kovshirina YV, Kovshirina AE, et al. *Opisthorchis felineus* infection and cholangiocarcinoma in the Russian Federation: a review of medical statistics. *Parasitol Int* 2017; 66: 365-71.

Capsule

The association between HLA genetic susceptibility markers and sonographic enthesitis in psoriatic arthritis

Enthesitis is an important pathophysiologic component of psoriatic arthritis (PsA). Human leukocyte antigen (HLA) genes are implicated in the pathogenesis of PsA. Little is known about the relationship between HLA genetic susceptibility markers and enthesitis in PsA patients. **Polachek** and co-authors aimed to examine the association between HLA genetic susceptibility markers and sonographic enthesitis in PsA. A cross-sectional analysis was conducted in patients with PsA. Sonographic enthesitis was assessed according to the Madrid Sonography Enthesitis Index scoring system. HLA genotyping was performed using sequence-specific oligonucleotide probes. The association between six HLA susceptibility markers of PsA and the severity of sonographic enthesitis was assessed using multivariate regression models adjusted for age, gender, body mass index, and disease

duration. The study comprised 225 patients, 57.8% of whom were men. The mean \pm standard deviation (SD) age was 56.1 ± 12.7 years, and the mean \pm SD PsA duration was 16.9 ± 12.3 years. In the multivariate regression model, HLA-B*27 was associated with a higher enthesitis score, $\beta = 4.24$ (95% confidence interval [95%CI] 0.02–8.46), and the interaction between HLA-B*27 and PsA duration was statistically significant, showing an increasing effect of HLA-B*27 with longer PsA duration, $\beta = 4.62$ (95%CI 1.38–7.86). The authors concluded that HLA-B*27 is associated with more severe sonographic enthesitis in PsA, particularly in patients with longer disease duration. This finding highlights the possible role of genetic variants in predisposing to PsA subphenotypes.

Arthritis & Rheumatol 2018; 70: 756

Eitan Israeli

Capsule

Impact of sustained remission on the risk of serious infection in patients with rheumatoid arthritis

This retrospective analysis by **Accortt** and co-authors examined how sustained remission impacted risk of serious infections in patients with rheumatoid arthritis (RA) enrolled in a clinical registry. Inclusion criteria included RA diagnosis, age ≥ 18 years, and ≥ 2 Clinical Disease Activity Index (CDAI) scores followed by a follow-up visit. Index date was the second of two visits in which a patient had sustained remission (CDAI ≤ 2.8), low disease activity (LDA; $2.8 < \text{CDAI} \leq 10$), or moderate-to-high disease activity (MHDA; CDAI > 10). Follow-up extended from the index date until the first serious infection (requiring intravenous antibiotics or hospitalization) or the last follow-up visit. The crude incidence rate (IR) per 100 patient-years for serious infections was calculated for the sustained remission, LDA, and MHDA groups. The multivariable-adjusted incidence rate ratio (IRR) (adjusted for age, gender, and prednisone dose) compared serious infection rates across disease activity groups. Most patients

were female ($> 70\%$) and mean age was approximately 60 years. The crude IR (95% confidence interval [95%CI]) per 100 patient-years for serious infections was 1.03 (0.85–1.26) in the sustained remission group ($n=3355$), 1.92 (95%CI 1.68–2.19) in the sustained LDA group ($n=3912$), and 2.51 (95%CI 2.23–2.82) in the sustained MHDA group ($n=5062$). Compared to sustained remission, the serious infection rate was higher in sustained LDA (adjusted IRR 1.69, 95%CI 1.32–2.15). Compared to sustained LDA, the serious infection rate was higher in sustained MHDA (adjusted IRR 1.30, 95%CI 1.09–1.56). The authors concluded that in this study, lower RA disease activity was associated with lower serious infection rates. This finding may motivate patients and health care providers to strive for remission rather than only LDA.

Arthritis Care & Res 2018; 70: 679

Eitan Israeli