

Amebic dysentery imported from USA and an overview of invasive amebiasis in the Czech Republic

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Clinical case

The parents and three sons, aged 8, 11, and 14, traveled for two months through national parks in the western USA (Fig. 1) from June to August 2018. In November 2019, the oldest boy developed diarrhea and abdominal pain. He was investigated in gastroenterology department, a colonoscopy was performed with a finding of inflammatory changes in the large intestine. Crohn's disease was suspected and treatment with 1 mg per kg of prednisolone was started. Due to the travel history and diarrheal disease in the father, the parents requested stool examination for parasites, which confirmed an infection with *Entamoeba histolytica* in all family members (Tab. 1). The histology slides of boy were reassessed, trophozoites of *E. histolytica* in lesions of the large intestine were presented and the diagnosis of amebic colitis was confirmed (Fig. 2). Prednisolone was discontinued and all family members were treated with metronidazole and luminal amebicide agents. Control stool investigation using microscopy and PCR were negative in all patients finally (Tab. 1).

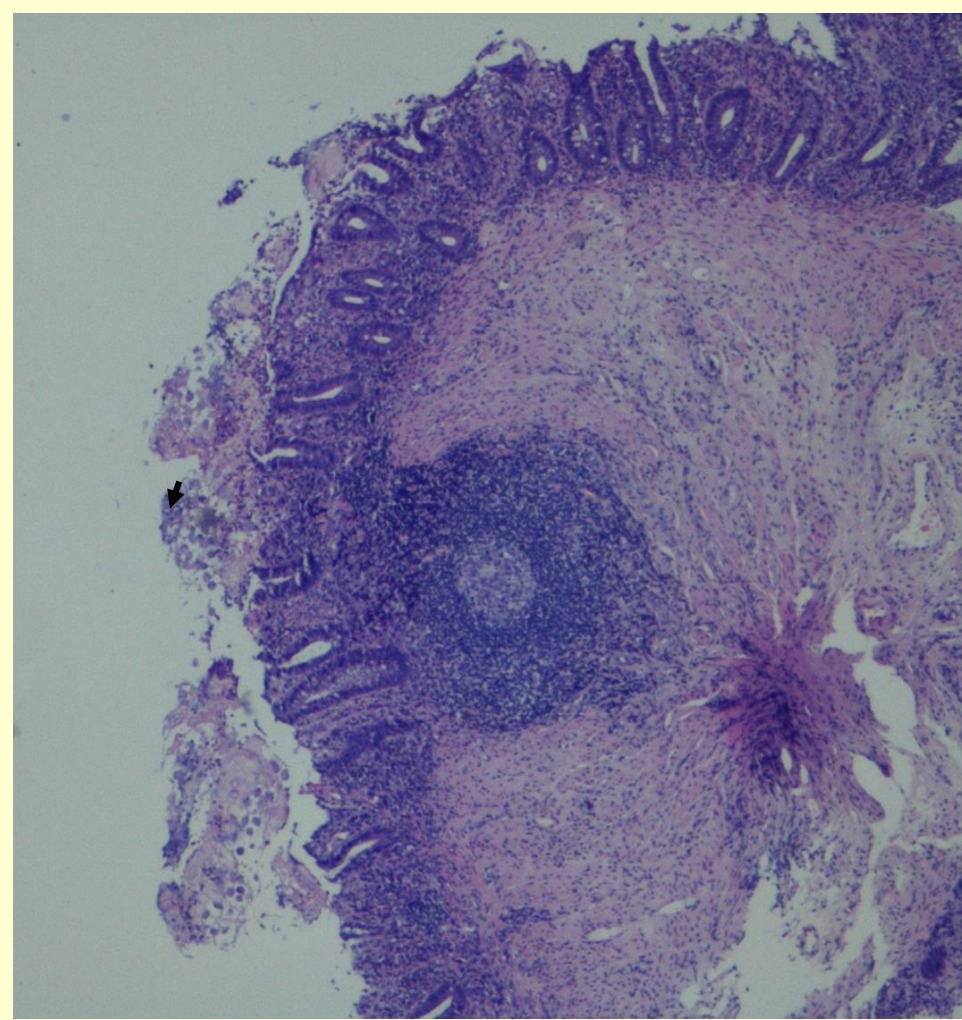
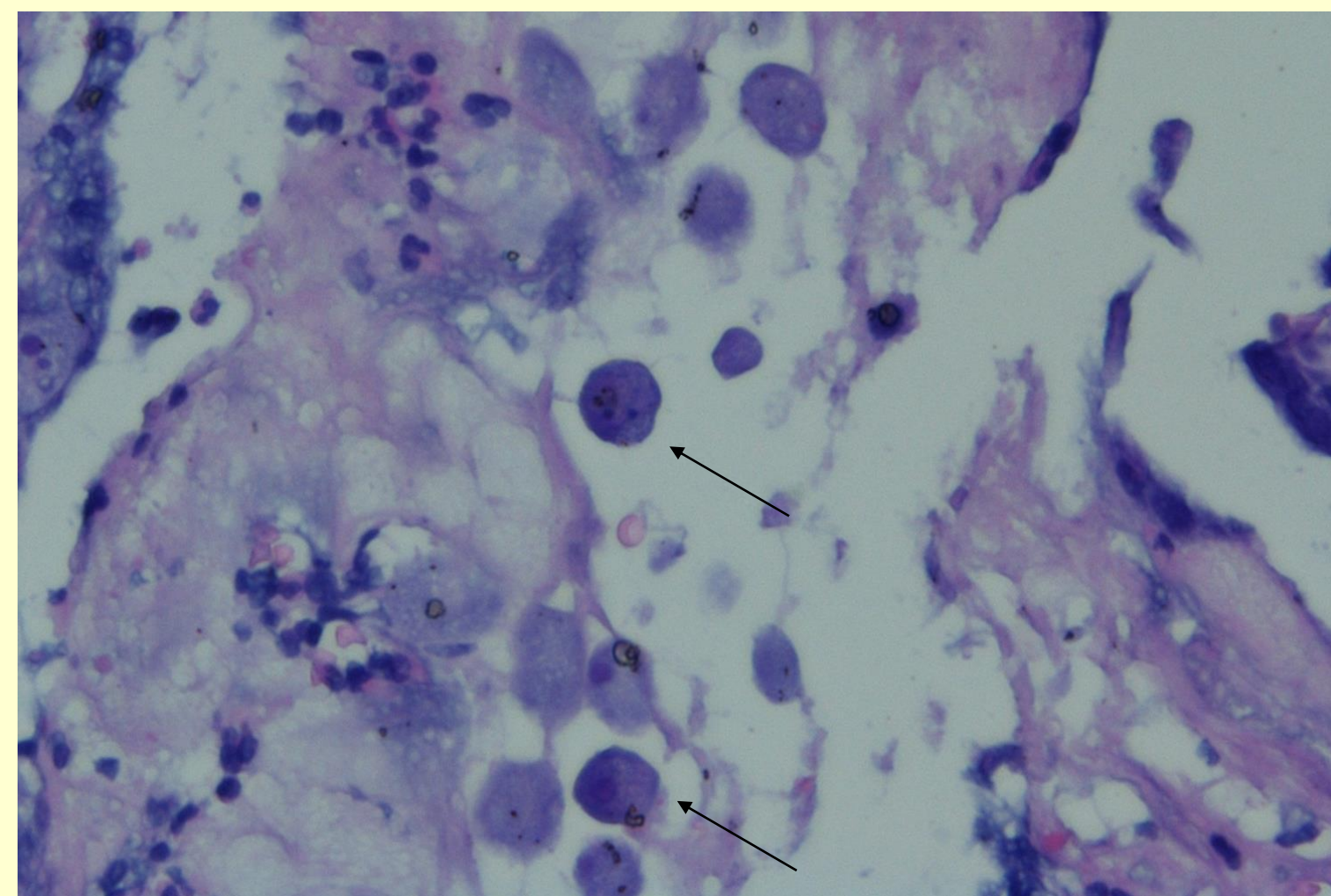


Fig. 1: Family drunk untreated water in the USA national parks

Fig. 2: Histology of colonic biopsy with *E. histolytica* trophozoites, H&E

Tab. 1: Clinical signs, microscopy and PCR stool investigation, serology and treatment of all patients

Patient	Clinical signs	Stool investigation		Serology ELISA/IHA	Treatment	Stool control
		Microscopy	PCR			
M, 2004	Diarrhea	Negative	Pos.	16,4/1:16384	MTZ 3x500mg, 10 days Cloroxin 3x250mg, 5days	Neg.
M, 2006	None	Positive	Pos.	14,8/1:16384	MTZ 3x500mg, 10 days Doxycyclin 2x100mg, 5 days Cloroxin 3x250mg, 5 days	Neg.
M, 2009	Abdom. pain	Negative	Neg	8,5/1:4096	MTZ 3x500mg, 10days	Neg.
M, 1974	Diarrhea	Positive	Pos.	21,5/1:4096	1.MTZ 3x500mg, 10 days 2.MTZ 3x500mg, 14 days Doxycyclin 2x100mg, 7 days Cloroxin 3x250mg, 7 days	Pos. Neg.
F, 1975	None	Positive	Pos.	4,5/NA	1.MTZ 3x500mg, 10 days 2.MTZ + doxycyklin + cloroxin, 14 d.	Pos. Neg.

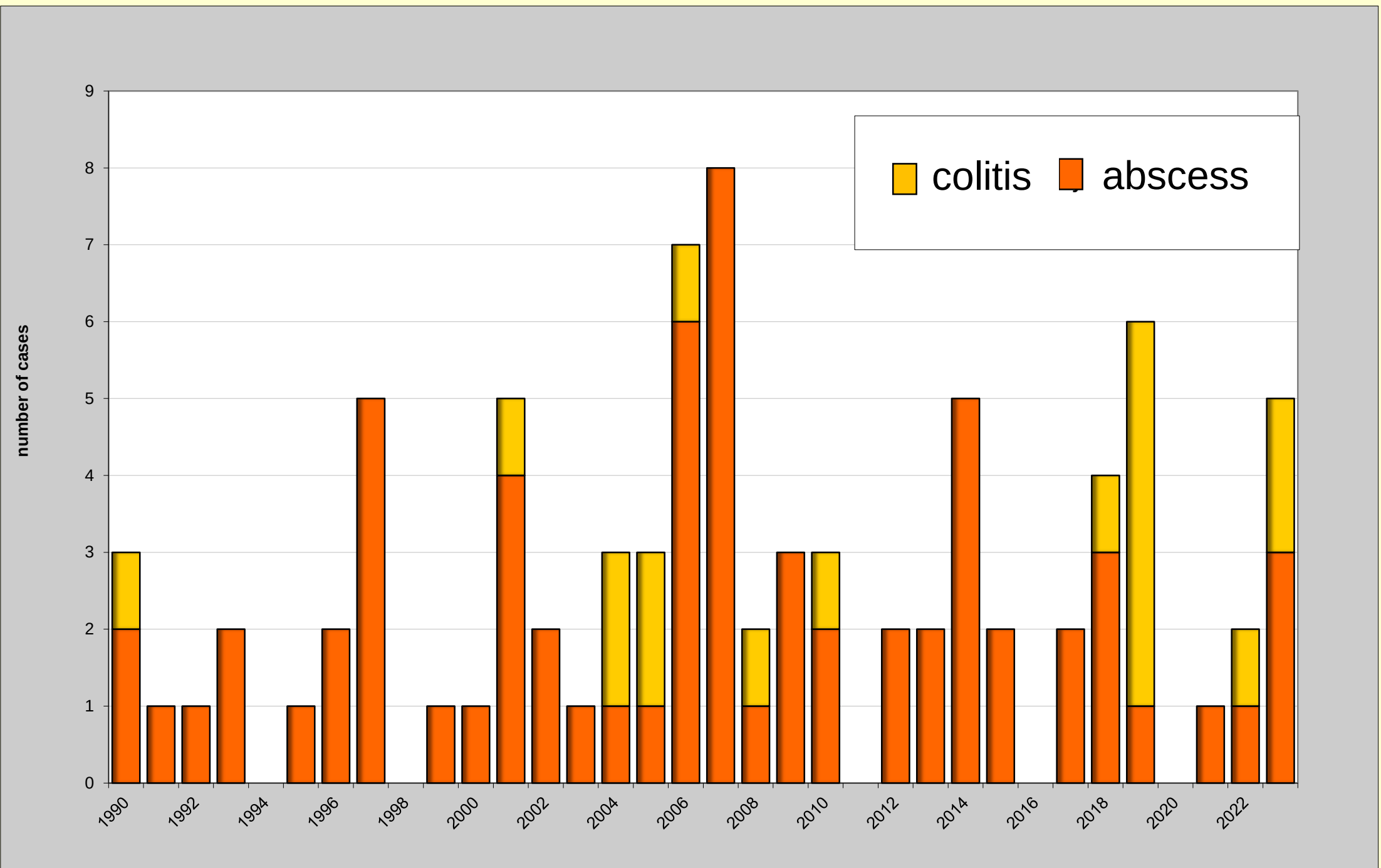


Fig. 3: Patients with amebic colitis and liver absces during 1990 - 2023

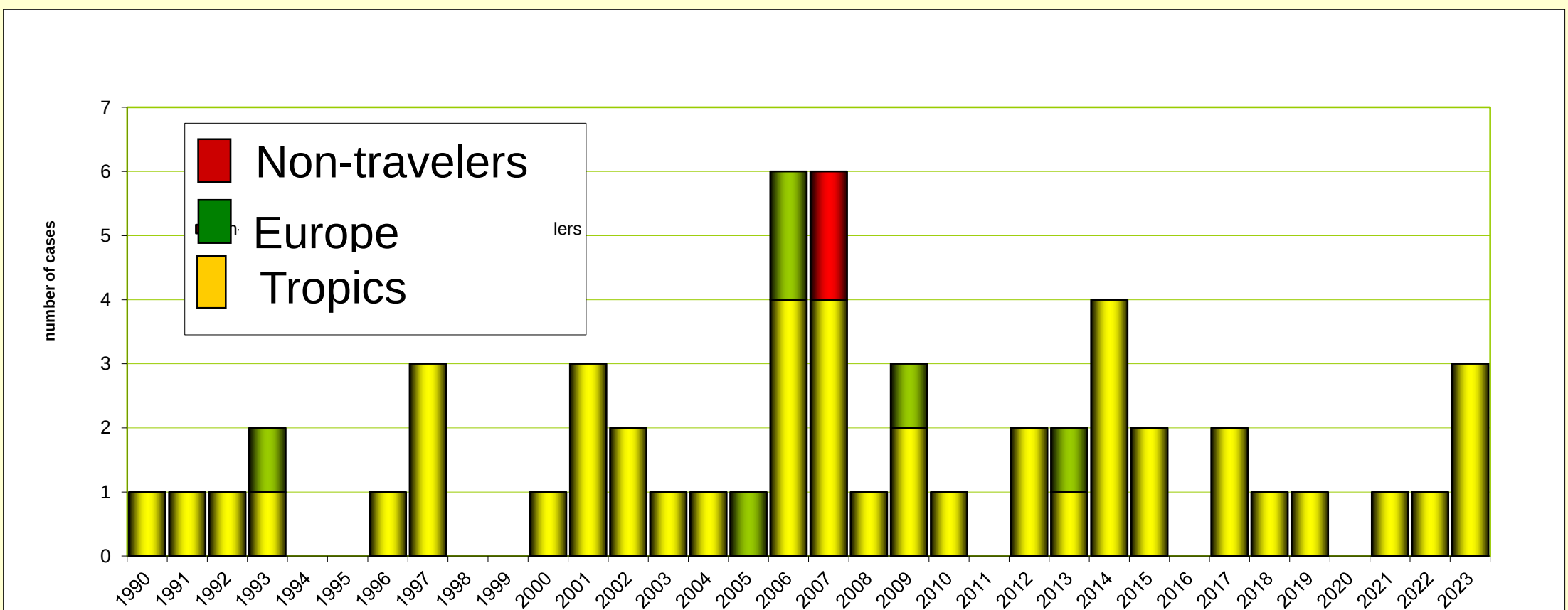


Fig. 5: Patients with amebic liver abscess according travel history

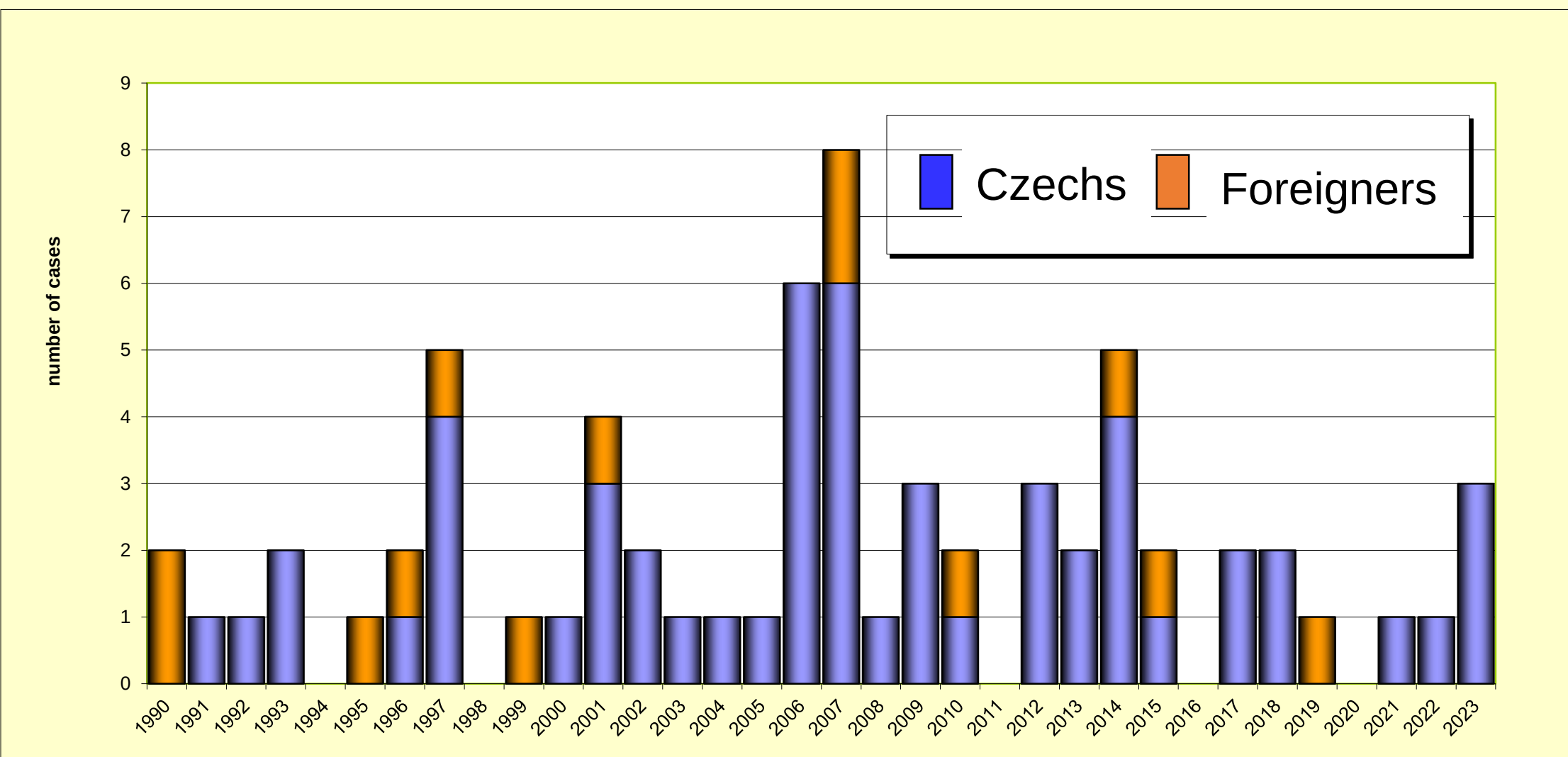


Fig. 4: Patients with amebic liver abscess according nationality
54 Czechs; 13 foreigners (Vietnam 6; India 2; Mali, Laos, Ukraine, Nigeria, Belorussia 1)

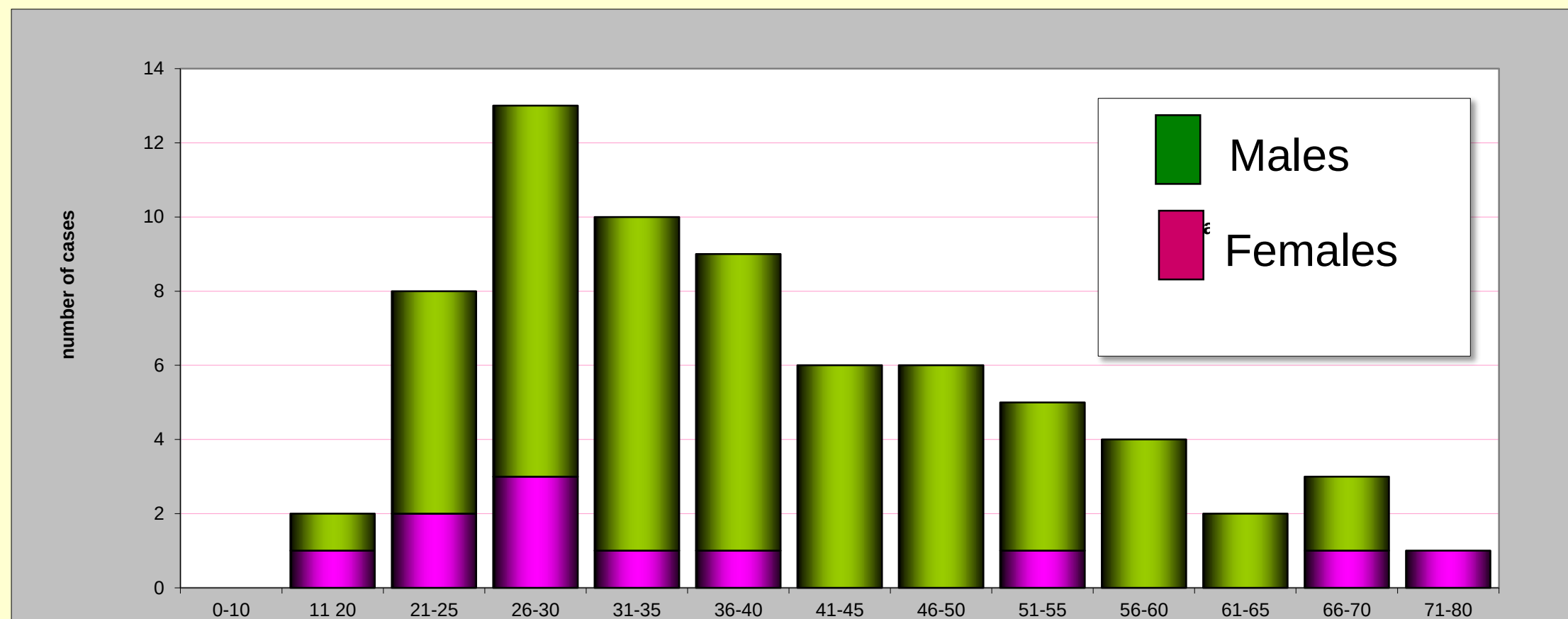


Fig. 6: Patients with amebic liver abscess according gender and age

Invasive amebiasis in the Czech republic

There were diagnosed and managed in total 67 patients with liver amebic abscess and 18 patients with amebic colitis (Fig. 3) at the infectious diseases departments of University Hospital Bulovka in Prague and Regional Hospital in Liberec and National Reference Laboratory for tropical parasitic infections in Prague during 1990 and 2023. The countries of invasive amebiasis acquisition of our patients is illustrated on Figure 7. The most cases were acquired on the Indian subcontinent (20 abscesses, 5 colitis). There were 12 patients with liver abscesses and 1 patient with colitis that did not travelled outside Europe.

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Fig. 7: Geographical distribution of invasive amebiais in our patients

