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ECCMID 2010

# Grand Rounds

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## Title

Ascites in a patient after solid  
organ transplantation

## Patient I

- 47-year-old caucasian male carpenter presented with nausea, vomiting, and massive ascites to the infectious diseases outpatient clinic
- Ascites was ongoing for several months, and multiple paracenteses were performed
  - Patient was not seen by an ID specialist over this period of time
- No weight loss, night sweat or diarrhea

## Patient II

- Combined pancreas-kidney transplantation due to type 1 diabetes 7 years earlier
- Organ functions stable under immunosuppression with tacrolimus, sirolimus and mycophenolat mofetil
- Gastroscopy, CT scans and MRI of the abdomen did not show relevant pathologies
- Screenings for malignancy, liver- and kidney-dysfunction were all negative
- Liver biopsy was unremarkable

## Question 1

- Differentials on possible infectious causes?

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## Patient III

- Review of the blood work results showed ongoing moderate eosinophilia for several months (6-8% eosinophils, absolute value 0.4 to 1.1 G/l respectively)
- Screening for CMV unremarkable
  - IgG >250 U/ml (normal range  $\leq 6$ )
  - IgM 0.45 (normal range 0.00-0.85)
  - Pp65 neg.
- Screening for HAV, HBV and HCV unremarkable

## Question 2

- Further thoughts on differential diagnosis?

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## Patient IV

- Numerous animal contacts
  - Mainly dogs
    - Owns one dog himself and reports especially close contact to one of his parents' many dogs
    - Patient further owns rabbits, guinea pigs and a lizard, and reports daily moderate contact to them
- Not eating raw or undercooked fish or pork



## Patient V

- Extensive travelling inside Europe over the recent years
  - Hungary, every week (his parents live there)
  - Croatia, every year 40-50 days (for vacation purposes, last visit 6 months ago)
  - Turkey, the Netherlands, and France (for vacation as well as for business, all more than a year ago)
  - Romania (for business, about 3 years ago)
- No travelling outside Europe

## Examination

- Abdominal distension
- Abdominal fluid wave with bulging at the flanks
- Otherwise unremarkable
  - No fever
  - Heart and lungs unremarkable on auscultation
  - No lymphadenopathy
  - No skin lesion

## Laboratory

- Peripheral blood counts showed relative eosinophilia (8%, absolute value 0.8 G/l), total leukocyte count and C-reactive protein level were within normal limits
- Paracentesis showed leukocytosis (1670 WBC/mm<sup>3</sup>) with markedly elevated eosinophils (92%)
- Screening of stool for ova was negative

## Question 3

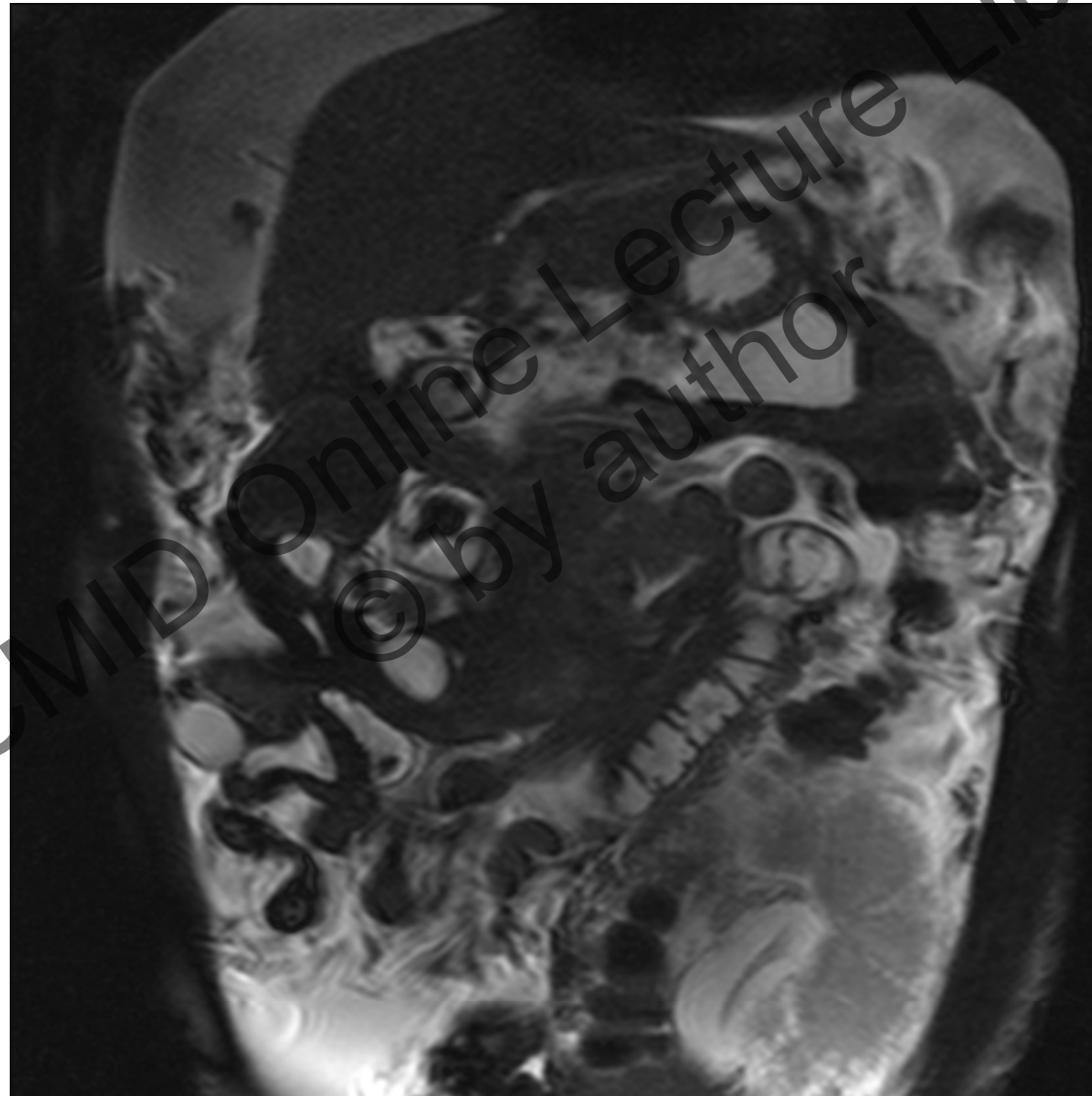
- What was the diagnosis? How was it made?

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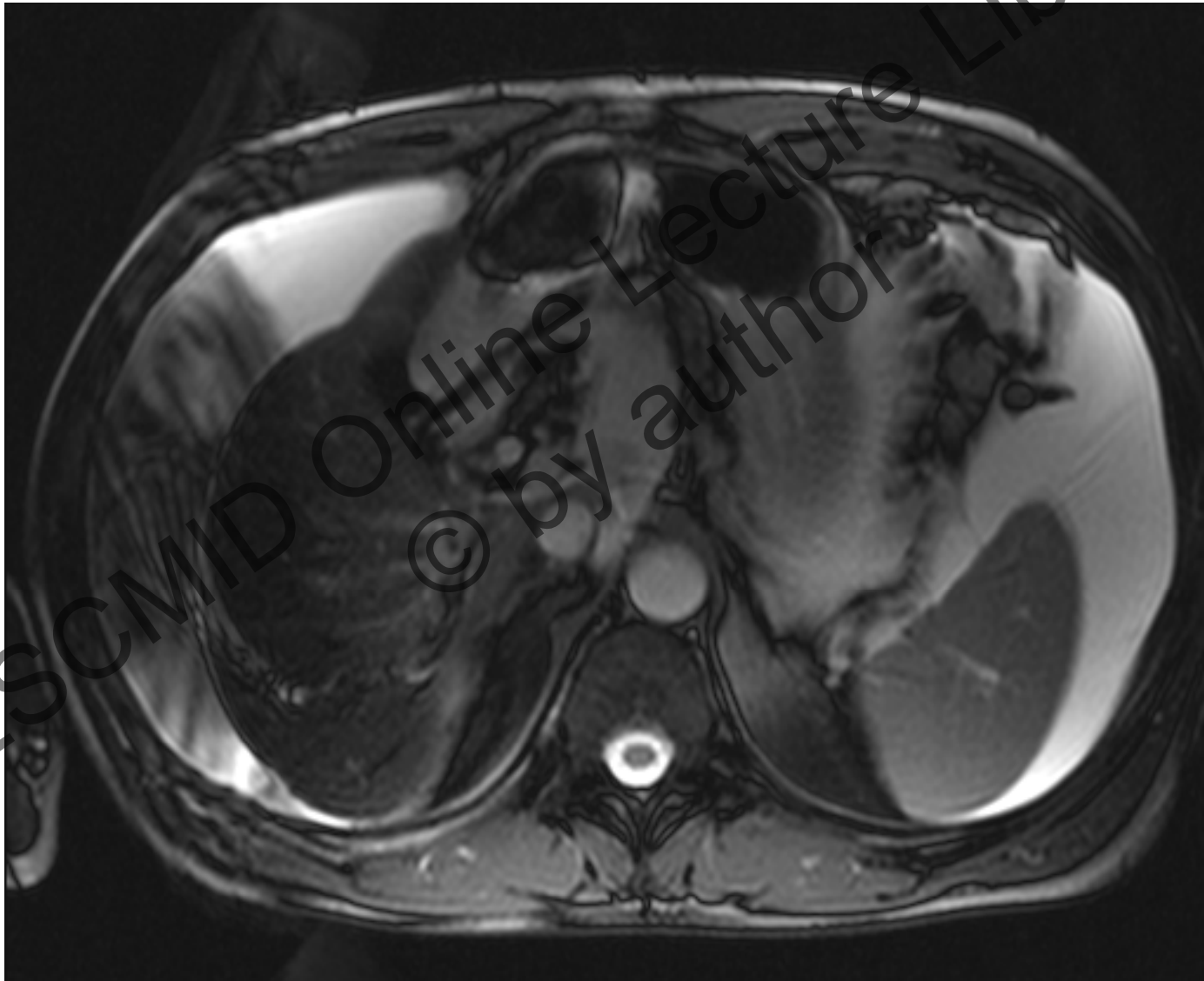
## Diagnosis

- **Toxocara-associated eosinophilic ascites**
- Serology for toxocara became positive
  - Toxocara-ES ELISA (IgG) 20 U
  - Westernblot (IgG) positive
- Confirmation 3 weeks later
  - Toxocara-ES ELISA (IgG) 25 U
- Serologic screening for other parasites (e.g. Ascaris, Fasciola, Strongyloides) was negative

## Clinical pictures I



## Clinical pictures II



## Question 4

- Treatment options?

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## Treatment options

- First choice: albendazole 400mg  
po bid x 5 days
- Alternative: mebendazol 100-  
200mg po bid x 5 days
- Use of antihelminthics  
controversial:  
→ Controlled trials greatly needed!
- Diethylcarbamazine  
(AE: leucopenia in immunocompromised  
persons)
- If ocular larva migrans: oral  
prednisone + subtenon  
triamcinolone

## Chosen treatment

- Five-day-course of albendazole 400mg bid
- Was repeated due to patient's immunosuppression

## Results

- After that, the ascites stabilized and the eosinophilia vanished

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# **Overview: Toxocara-associated eosinophilic ascites**

***ECCMID Grand Rounds 2010***

***Martin Hoenigl, Section of Infectious  
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## Overview: Eosinophilic ascites due to parasites

- Visceral larva migrans
  - Toxocariasis (Toxocara canis + Toxocara cati)
  - Anisakiasis
  - Ascaris suum
  - Trichinella spiralis
  - Baylisascaris procyonis
  - Capillaria hepatica
  - Ancylostoma sp.
  - Gnathostomosis
  - Dirofilaria
- Other parasites
  - Strongyloides stercoralis
  - Ascaris lumbricoides
  - Schistosomiasis
  - Fasciola hepatica
  - Giardia lamblia

## Overview: Toxocara-associated eosinophilic ascites

- Poor understanding of global impact as well as indirect and direct costs of human toxocariasis
  - Insufficient clinical awareness due to broad range of presenting features (majority non pathognomonic)
  - No clear repository for efficiency of clinical, laboratory and treatment interventions
  - Insufficient data for cost-benefit analysis
  - Current antibody serodiagnostic tests not useful in determining treatment outcomes



Diagnosis by combination of clinical and laboratory investigations, including serodiagnosis

## Toxocariasis: the future?

- Development of antigens which will be capable of determining treatment outcome
- Establishment of web-based centres of excellence
  - Standardized diagnostic criteria
  - Educational support
  - Surveillance questionnaires
  - Repositories of current knowledge, which augment current veterinary and public health educational sites

## Closing Remarks

- Robert Krause
- Thomas Valentin
- Prof. Robert Read and Prof. Stanley Deresinski
- ESCMID

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