

Chagas disease

Short case presentation, Chanel SINHA, Zürich

Mrs F., 55y, 1966, living in Zürich

Medical history:

- First mentioned complaints at the age of 34 in Zürich (2000) :
Nausea, Dysphagia, intermittent thoracic pain
Endoscopic dilation was performed due to impression of Achalasia
- At the age of 42 progressive Dysphagia (2008)
- A prolonged cough lead to medical evaluation at age 43 (2009)
with CT-scan and the following diagnosis:
**Megaesophagus with marked hypomobility without significant
propulsion, thrush-esophagitis, achalasia**

First leading Lab and Diagnosis (2010), age 44

Chagas Disease with Megaesophagus

- cough most likely due to nocturnal aspiration

Lab 2018

PCR 2018 negative

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Trypanosomiase amerik. (Chagas) ELISA* 2.11 < 0.30 OD
Trypanosomiase amerik. (Chagas) IFAT * 1280 < 160 rez. Titer
Interpretation: POSITIV
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Background of Miss F., 1966

- Brazilian, originally from Bahia (northeastern Province in Brasil) , grew up in a poor area , at the age of 7 shifted to Rio
- Father unknown, mother died when she was 1yr old (unknown reason), rised partially by her grandmother and her aunties, one of them died at age 65 due to Chagas -Cardiomyopathie
- Came to Zürich in 1994 (28y), was married to a CH, divorced in 2002, no children, no relatives in CH, works as a waitress, every now and again goes back to Rio

Clinical course - Treatment - Evaluation

- Underwent repeated endoscopic dilation(2001,2009,2018,02/2020) according to symptoms (increasing difficulty in eating /thoracic pain) , Myotomie in discussion
- Repeated evaluation for cardiac involvement was negative
- 08/2020,age 54: Cerebrovascular stroke A.cerebri media with sensomotoric Hemisindrome and cognitive deficits
 - Neurorehab, is now at home again, some slight deficits
- No known risk factors for stroke , cardiac evaluation negativ ,no sclerotic changes of vessels seen
 - Nevertheless cardiac involvement of Chagas-Disease?

Mr. T.C., 1952, living in Zürich

- Referred for further investigation by Family doctor :
- He was screened at the age of 61 for Chagas disease 09/2013 in the Blood donation centre in Zürich with a positive result , confirmed at the Swiss TPH
- According to family doctor there were neither complaints nor clinical signs for a cardiac or gastrointestinal involvement

Background

- Brazilian from Rio Grande do Sul (the most southern state of Brasil) , grew up with his parents, 7 brothers and 5 sisters,
- Lived in Brazil until he was 21 (1973), then immigrated to CH, lives in Zürich ,is married and has 2 children, by the time of consultation (age 61) in early pension, but still working as a bus driver 1-2d per week
- Acted as a tourist- guide for friends in Matto grosso do Sul every now and again

- He remembered having triatomine bugs in their wooden home, but was not aware of bites by the bugs
- Mother died at age 79 due to cardiac failure
- One brother with an alcohol problem died at age 50 due to a cardiac problem

Evaluation and Diagnosis

- Physically active person, cycling daily
- Subjectively oligosymptomatic after cardiac stress - just needed a longer recovery break due to physical fatigue
- Physical examination apart from obesity normal
- Cardiac evaluation (Holter/Th/Echo/Ergo, later MRI):
- **Excentric hypertrophic left ventricle (EF 50%) with apical hypo- and akinesia, DD: Chagas CMP, CHD** -
- cvRF: Obesity, pos. family history, age
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Treatment

- Secondary pharmaceutical prevention, regular cardiac follow up
- Antitrypanosomal Tx discussed with patient, rejected

P.S.

- Riskadapted Chagas-screening for blood donors started in January 2013
- Mr. T.C. was screened positive in Sept.2013
- He had donated 54 times (77 products)
- Look-back procedure identified a 70y old patient who 5yrs earlier received a platelet concentration (non-pathogen-inactivated) from T.C.
- Due to renal disease this recipient underwent renal transplantation 4 mths later
- Hospitalization 2years later in 12/2010 with fever, cough, dyspnea, heart- and graft failure
BAL and blood smears showed Trypanosoma sp. -Tx started but patient died
- Autopsy showed generalized myocarditis with infiltration of T. cruzi as well as perforated sigma diverticulitis

- Initial assumption recipient was infected 5y before transplantation due to extensive travelling in Latin america
- Transfusion-transmitted disease raised years later retrospectively with the Chagas lookback - request
- All available samples of T.C. were repeatedly PCR - neg , no genotyping could be done
- Final proof of transfusion-transmitted T. cruzi infection is missing but highly suspected to be the mode of transmission