

 **CORRESPONDENCE**

The Diagnosis and Treatment of Pinworm Infection

by Dr. med. Sebastian Wendt, Dr. med. Henning Trawinski, Prof. Dr. med. Stefan Schubert, Prof. Dr. med. Arne C. Rodloff, Prof. Dr. med. Joachim Mössner, and Prof. Dr. med. Christoph Lübbert, DTM&H in issue 13/2019

Critical Remarks

We very much welcome the detailed survey of pinworm infection, which is probably the most common intestinal parasitosis in Germany (1). However, some statements require critical commentary.

A decline in infection rates since Germany's reunification cannot be proven. Due to the particular patient populations, the long period covered, as well as infrastructural changes between the point prevalence studies carried out in Schwerin in 1978 and 1997 (2), no solid conclusions can be drawn for Germany as a whole. The study from the Greater Berlin area (3) did not show any locally accumulated detection rates (for example, differences between districts), but 5578 examinations between 2007 and 2017 revealed a steady increase in pathogen detection. A seasonal distribution of pathogen detection was only seen for ≥ 6 -year-old patients, but not for younger patients.

Migratory movements of pinworms may contribute to the unexplained pathophysiology of perianal itching. It is more likely, however, that itching is induced by egg antigens that are released. This is supported by the fact that female worms are outside the intestine only for a short time to attach the eggs, while itching is intermittent or permanent. In the Berlin study, worms were detected in only 9 out of 971 positive samples (3).

Disintegration of the worm cuticle by fingers and fingernails is unlikely. It is difficult to imagine that the thick cuticle of the small worms on skin (which gives way to pressure) would be slashed or otherwise disintegrated by fingers/fingernails of young children. Fur-

thermore, viewed from the aspect of pathogen transmission, regular destruction of adult worms would be unfavorable.

The sensitivity of using cotton swabs for pathogen detection, indicated as an alternative to the adhesive tape test, should be supported by references from the literature.

Pyrrinium embonate has long been used for the treatment of pregnant women.

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References

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3. Friesen J, Bergmann C, Neuber R, et al.: Detection of *Enterobius vermicularis* in greater Berlin, 2007–2017: seasonality and increased frequency of detection. *Eur J Clin Microbiol Infect Dis* 2019; 38: 719–23.

Prof. Dr. med. Hermann Feldmeier
 Institut für Mikrobiologie und Infektionsimmunologie
 Campus Benjamin Franklin, Berlin, Germany

Prof. Dott. Univ. Pisa Joachim Richter
 Institut für Tropenmedizin und Internationale Gesundheit
 Charité – Universitätsmedizin Berlin, Germany

Prof. Dr. med. Ralf Ignatius
 MVZ Labor 28, Berlin and
 Institut für Mikrobiologie und Infektionsimmunologie
 Campus Benjamin Franklin, Berlin, Germany
 r.ignatius@labor28.de

Conflict of interest statement

Prof. Ignatius has received honoraria from Springer-Verlag for a co-authorship of a book chapter that is related to the topic.

The remaining authors declare that no conflict of interest exists.

In Reply:

We thank our Berlin colleagues for their comments and supplements to our article (1).

In fact, the cited Schwerin study (2) reflects only a narrow geographic area and therefore is not representative of Germany as a whole. Unfortunately, there are almost no other epidemiological studies on the prevalence of pinworm infections in Germany that could be used to draw a more accurate picture. For our assessment of the historical development of infection rates, we also incorporated our personal clinical im-

pressions from sometimes decades-long outpatient practice. Current (nationwide) prevalence studies are urgently needed. The locally clustered detection rates in the Berlin study between 2007 and 2017 (3) should also not have been understood to mean that detection rates increased in individual districts within Berlin, but rather that they increased throughout the Greater Berlin area.

We are also grateful for the supplemental information to the pathogenesis of itching, in which the egg antigens, rather than worm movement, are postulated to be the main cause. While this also seems

plausible to us, it currently cannot be substantiated by any study.

It is possible that the worm cuticle is less likely than previously assumed to be destroyed by intense scratching with fingernails (although the epidermis can also be eroded [scratch marks]). Unfortunately, to our knowledge, there are no experimental tests on the elasticity of the *Enterobius* cuticle.

Pyrvinium embonate is a treatment option for pregnant women after risk–benefit assessment and with careful monitoring. There are no comparative studies on mebendazole use for *Enterobius* during pregnancy.

It should also be emphasized again that, in the pulse scheme proposed by us for the treatment of chronic recurrent pinworm infection, a single dose of mebendazole once every 14 days is sufficient after completion of the initial therapy.

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References

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On behalf of the authors

Dr. med. Sebastian Wendt
Prof. Dr. med. Arne C. Rodloff
Prof. Dr. med. Christoph Lübbert, DTM&H
 Interdisziplinäres Zentrum für Infektionsmedizin (ZINF)
 Klinik und Poliklinik für Gastroenterologie
 Bereich Infektions- und Tropenmedizin
 Universitätsklinikum Leipzig, AöR, Germany
 christoph.luebbert@medizin.uni-leipzig.de

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CLINICAL SNAPSHOT

Dressler Syndrome in Anterior Myocardial Infarction Due To Traumatic Coronary Artery Dissection

A 36-year-old male physician presented to our emergency department with back pain after a fall while exercising on a trampoline. A fracture was excluded by X-ray and the patient was discharged. Two weeks later the patient presented again, this time with progressive fatigue, a temperature of up to 39.3°C, and thoracic pain on respiration. Clinical chemistry found elevated parameters of inflammation (leukocytes 16.9/nL, C-reactive protein [CRP] 159 mg/L). Echocardiography revealed a 3-cm pericardial effusion and an apical hypokinesia with left ventricular thrombus; computed tomography showed corresponding morphological findings. After pericardiocentesis, cardiac catheterization demonstrated traumatic dissection of the left anterior descending coronary artery with older thrombi, which was then treated by implantation of a stent. Inflammatory markers normalized under antiphlogistic therapy. The patient was discharged after 2 weeks with mild exercise dyspnea.

Dressler syndrome is an autoimmune-mediated pericarditis that rarely occurs nowadays but was observed in around 3% of post-infarction patients a few weeks after the myocardial damage before the advent of modern reperfusion treatment.

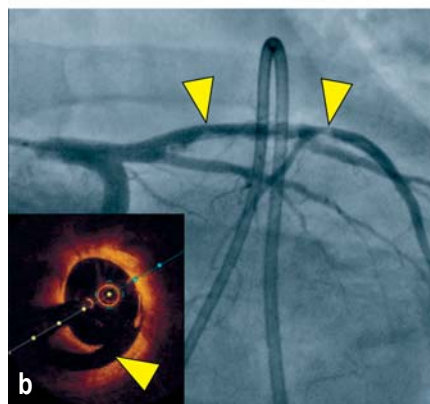
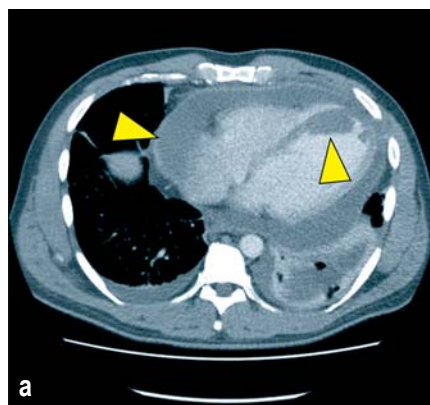
Prof. Dr. med. Henryk Dreger, Dr. med. Marcel Haug, Medizinische Klinik mit Schwerpunkt Kardiologie und Angiologie, Campus Charité Mitte, Charité—Universitätsmedizin Berlin, henryk.dreger@charite.de

Prof. Dr. med. Martin Möckel, Arbeitsbereich Notfall- und Akutmedizin, Campus Virchow Klinikum und Campus Charité Mitte, Charité—Universitätsmedizin Berlin

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Figure

a) Axial contrast-enhanced computed tomography showing serous pericardial effusion (20 HU) and left ventricular apical thrombus (arrowheads).
 b) Coronary angiography (postero-anterior caudal) with longitudinal narrowing of the lumen of the left anterior descending artery (arrowheads). Bottom left: Optical coherence tomography (OCT) showing coronary dissection as a result of the blunt thoracic trauma.