An update on the role of imaging in the care of patients with intestinal schistosomiasis

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BACKGROUND:

- Intestinal schistosomiasis leads to significant morbidity and mortality worldwide, including severe hepatic disease with peri-portal liver fibrosis, portal hypertension and subsequent esophageal varices
- Previous guidelines recommended the use of abdominal imaging to detect early hepatic changes, thereby improving disease outcome [1]
- There are no recently published or authoritative resources to guide the utilization of imaging in the initial diagnosis of schistosomiasis

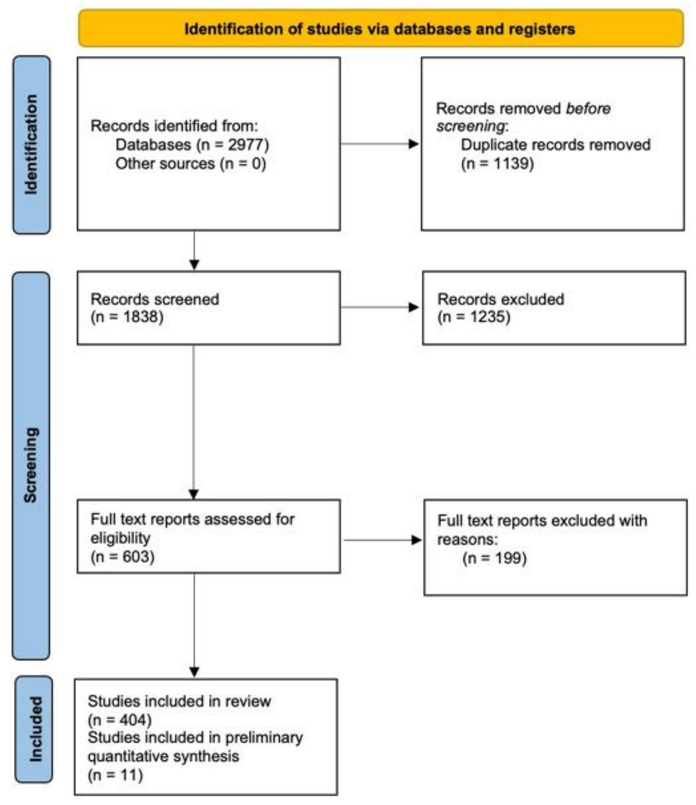
METHODS:

The search strategy was:

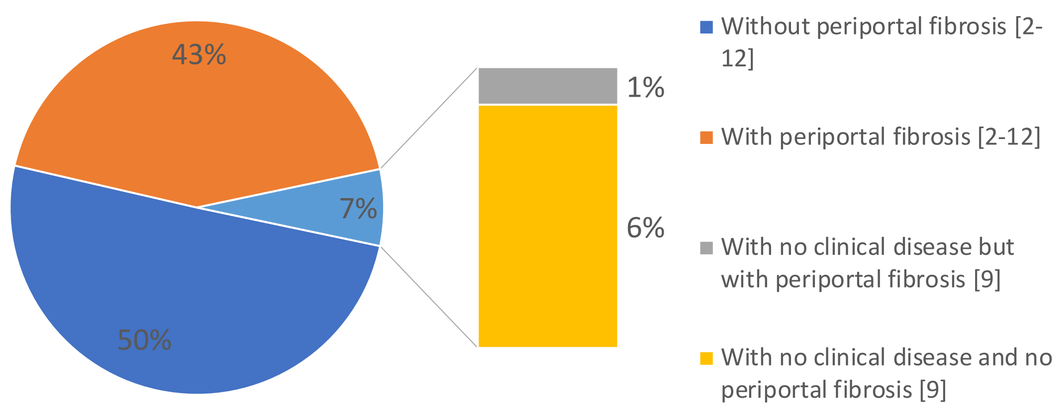
Schistosomiasis		Medical Imaging		Liver
Schistosomiasis		CT		Liver
Schistosoma mansoni		Computed tomography		Periportal fibrosis
Schistosoma japonicum		Ultrasound		Hepatic
		Ultrasonography		Echogenic
	AND	MRI	AND	Hepatosplenic
		Magnetic resonance imaging		Portal hypertension
		Echo imaging		
		Sonography		
		Sonogram		
Schistosomiasis OR (Schisto* AND (mansoni OR japonicum))		CT OR (computed AND tomography) OR Ultraso* OR Sonogr* OR MRI OR (Magnetic AND resonance AND Imaging) OR Echo OR Imaging		Liver OR periportal OR peri-portal OR fibrosis OR hepat* OR echogenic* OR (portal AND hypertension)

- Searched MEDLINE, Embase, Cochrane Library of Systematic Reviews, Epistemonikos, Global Health, NICE, TRIP and LILACS from database inception to February 28, 2019
- Screening was by two reviewers and a tertiary arbitrator and data extraction will be by two reviewers
- Metanalysis was performed on R (Version 4.2.2)

RESULTS:



Breakdown of schistosomiasis patients and liver disease

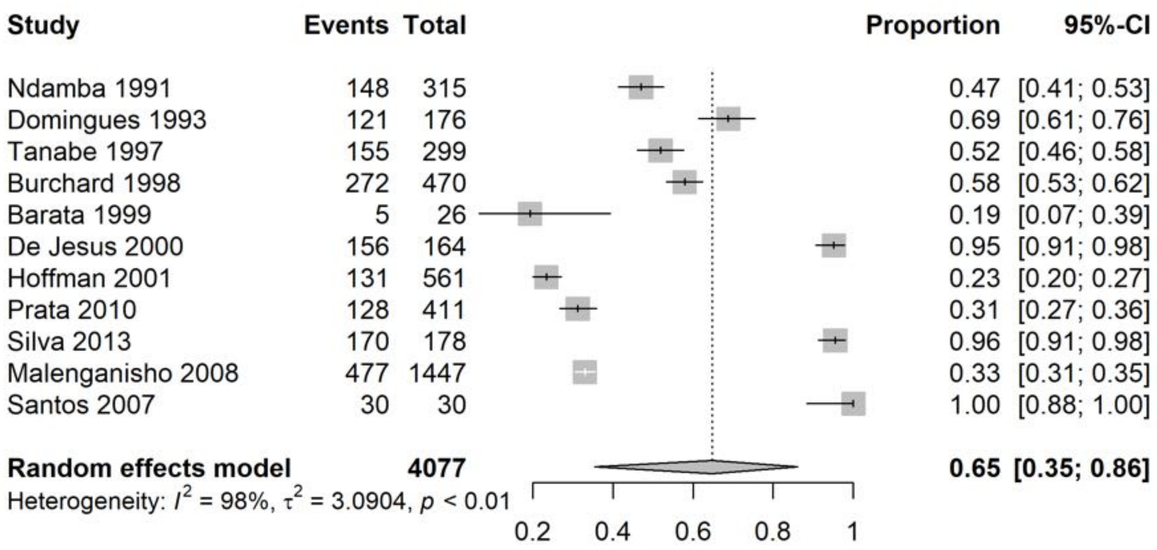


Of the 4,077 participants examined across 11 studies, the **pooled prevalence** of periportal fibrosis was **65%** and in Brazil, specifically it was **78%.**

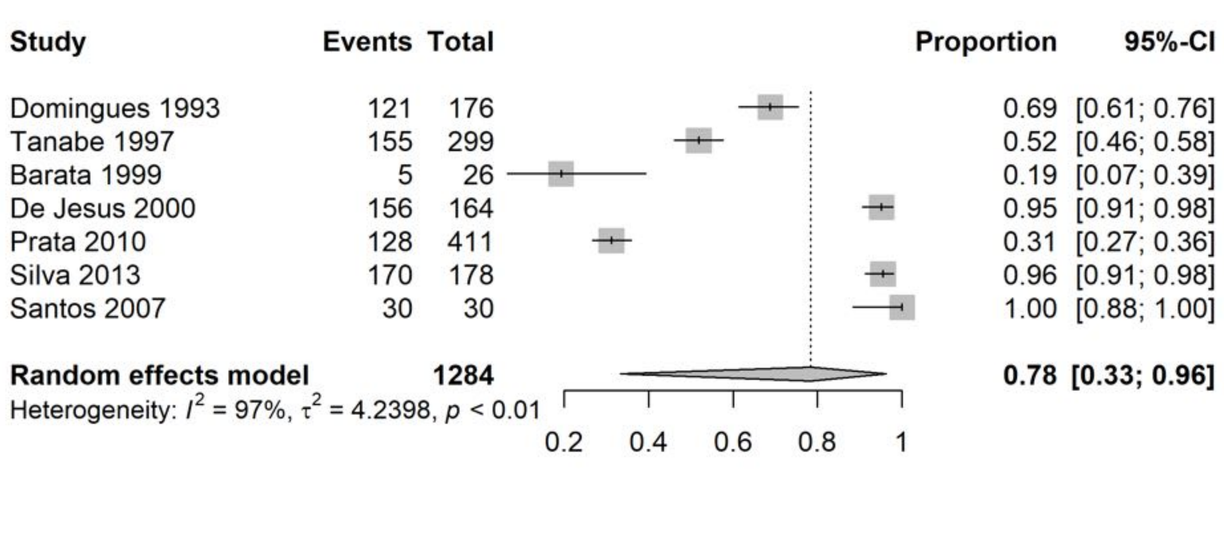
Abdominal ultrasound is an important **diagnostic tool** in the diagnosis of schistosomiasis related disease.

RESULTS:

Prevalence of periportal fibrosis across 11 studies



Sub-analysis of prevalence of periportal fibrosis in Brazil



- 11 studies included in this preliminary analysis
- 9 cross sectional and 2 case control
- All diagnosed with *Schistosoma mansoni*
- All studies used ultrasound imaging (none with CT or MRI)

DISCUSSION:

- Abdominal imaging is able to detect liver fibrosis in the absence of clinical disease [9]
- Synthesizing the current literature on abdominal imaging in the evaluation of schistosomiasis can translate into clinical recommendations for improved risk stratification and management of schistosomiasis, and thereby overall improvement of disease outcomes

References:

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