Clinical presentation & impact on quality of life of chronic Chikungunya disease

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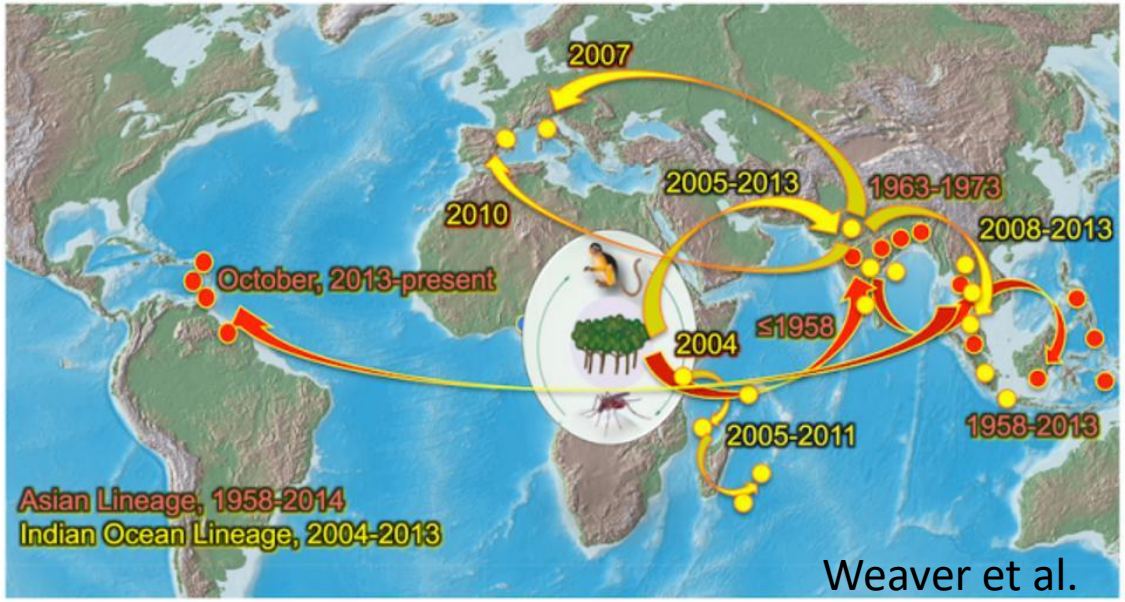
Chikungunya

- Vector borne (alpha)viral disease
- Mosquitoes: *Aedes aegypti* and *Aedes albopictus*
- ‘To walk bend over’
- Treatment: NSAID’s(?)
- Outbreak in Dhaka, 2017
  - Africa
  - India
  - Europe
  - Latin America



Weaver et al.

Symptoms

Acute disease:

- fever, headache, back pain, rash, arthralgia and myalgia
- Approximately 7 – 10 days

Chronic disease:

- musculoskeletal pain, arthritis, fatigue and depression
- No consensus on how to define chronic CHIK….

Study aims

AIMS:

(1) To estimate: the burden, duration and impact on quality of life (QoL) of the chikungunya outbreak in Curaçao 2014-2015, 3-16 months after diagnosis.

(2) to develop an assessment tool which aims to classify chronic chikungunya disease.

Disclaimer: results presented here should be interpreted in the light of the study site's geographical and cultural dimensions

Curaçao

- Caribbean island, former Dutch colony

- 150 000 inhabitants

- Approximately 50,000- 75,000 infections in 2014-2015

Study methods

Quantitative

- Cross-sectional survey between June and July 2015
- Questionnaire: disease duration, chronic symptoms, RAND-36

Qualitative

- In-depth interview
- Focus Group Discussions

Recruitment:

- Via 20 general practitioners (quantitative) or snowballing (qualitative)

How to define chikungunya chronicity?

Timeframe:

- Disease longer than 3 months.

Symptoms:

- What symptoms?
  - Is chikungunya only arthralgia/arthitis?
- Do we need gradations of severity?
- What is the role of co-morbidities?

Classifying chronic CHIK

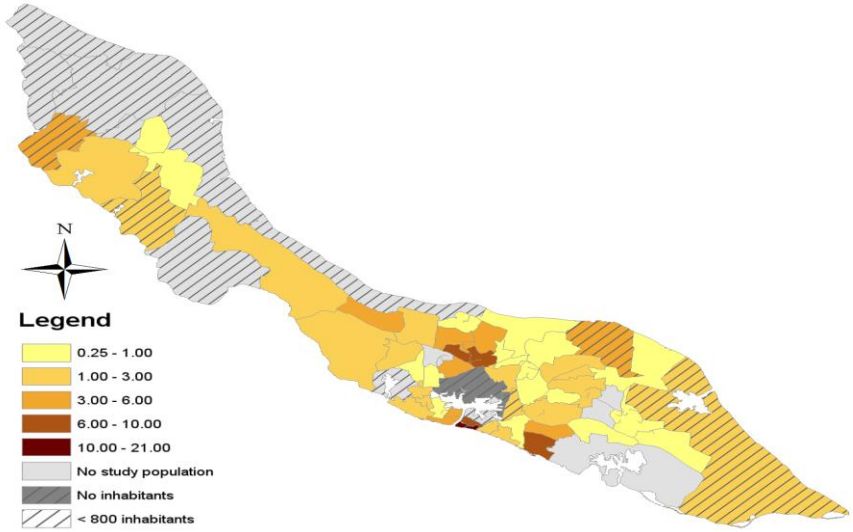
The Curaçao LTCS (Long-term chikungunya sequela) score

Table 1. Form to classify a chikungunya chronic patient	Do not agree at all				Fully agree
Check the box to what extent you agree with the following statements:	1	2	3	4	5
1. I am fully functional again after chikungunya……..	☐	☐	☐	☐	☐
2. I don't have any more complaints of chikungunya……	☐	☐	☐	☐	☐
3. I still feel the effects of chikungunya every day……	☐	☐	☐	☐	☐
4. The chikungunya effects seem to return again and again in my case.....	☐	☐	☐	☐	☐

- Range scores: 4-20
- 4= recovered; 5-12= mildly affected; 13-20= highly affected
- Crombach's Alpha = 0.884

Results

- Included in (quantitative) survey: 306 CHIK confirmed (serology) cases
- Qualitative research: 75 participants



Distribution of the study population among geozones of Curacao, cases per 1,000 inhabitants.

Symptom persistence

- Interview took place 92 – 460 days after disease onset.

- Curaçao LTCS classification:
  - Recovered population: 35.9% (n=110)
  - Mildly affected population: 35.0% (n=107)
  - Highly affected population: 29.1% (n=89)

Symptom persistence

- Persistence after one month:

79.5% (95% CI: 84.0%-75.0%)

- Persistence after 400 days:

64.2% (95% CI: 69.0%-59.4%)

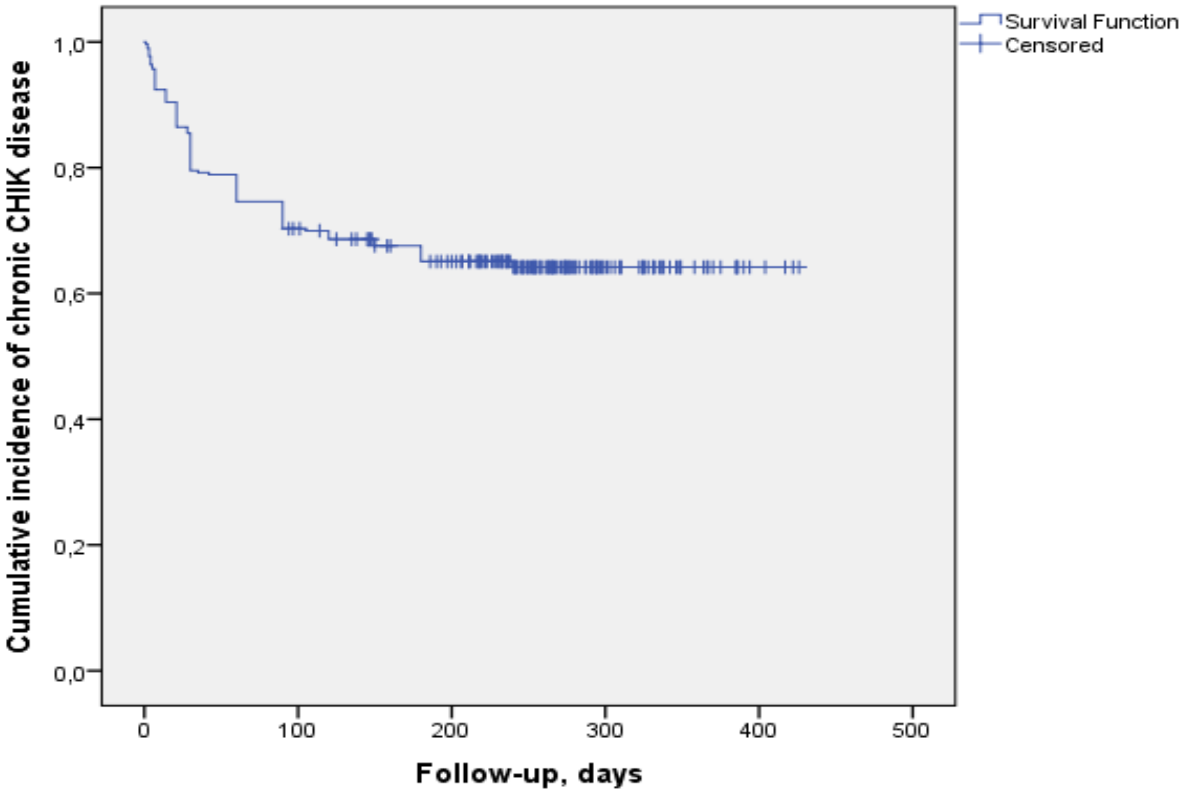
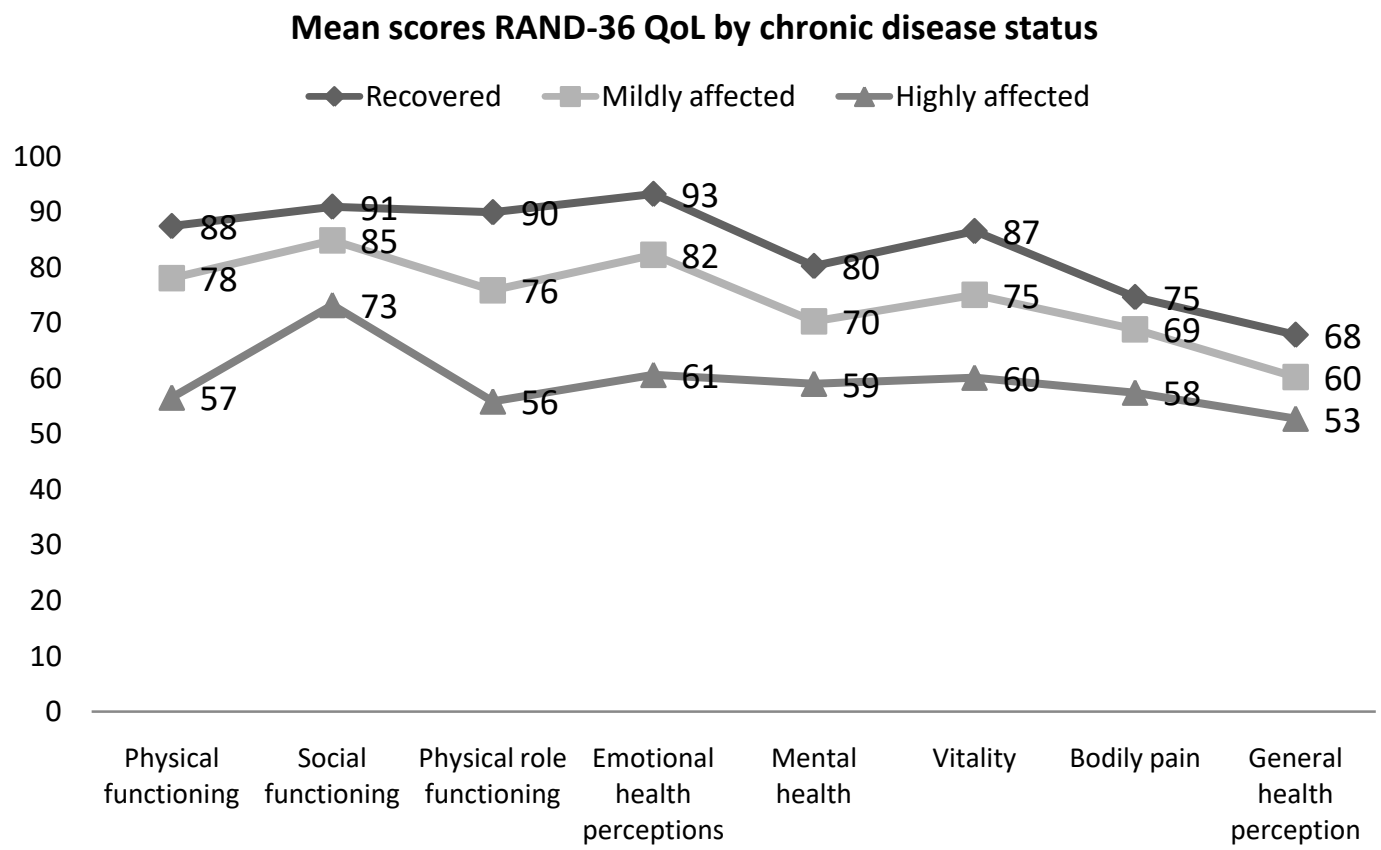


Fig. Kaplan-Meier curve of cumulative incidence of disease persistence by follow-up time.

Quality of life



Coping strategies influence impact on quality of life.

Problem focused coping – unmet expectations - worse quality of life	**Emotional coping – acceptation of situation - better quality of life**
Participant: Sometime the doctor tells you, 'What now, what should we do now?' and, 'let's try this and let's try that'. Then you get the feeling that the person, the doctor himself doesn't know what to do with ehm, with that chichingunya. *(Woman, aged 80–90 years)*	*Participant : maybe it is my mindset too, I mean see it a bit philosophic. I mean it goes… it's the truth of matter and it goes… and if you worry about it you will perceive a higher burden so eh, you know it when you see it.* *(Man, aged 70–80 years)*
Participant E: Everyone, so many people got it [chikungunya]. Because all say 'do you know what I took? Do you know what I have done?' So you hear from everybody and yes, you try [the promoted medicines]. *(Woman, aged 50–60 years)*	

Conclusion/ discussion

CHIK disease varies, but can be a long-lasting disease with major impact on QoL of patients.

When treating long-term chikungunya disease, be aware that:

- Chronic chikungunya presents often with more than just arthralgia/arthritis.
  - But, keep a broad differential diagnosis

- Major impact on quality of life - ‘highly affected’ (Curaçao LTCS) patients.
  - Highly affected patients might need follow-up or psychological help.

Conclusion/ discussion

Further, one should consider that:

- Offering many different treatment options does not necessarily help patients with chronic CHIK, while honest communication that currently no cure is available might help patients to understand, and cope emotionally with their condition.

Future perspectives

- Emerging disease, efforts are needed to improve knowledge and treatment of chikungunya.
- A valid and comprehensive definition of chikungunya is needed.
- Recent outbreak in Dhaka, your experience is valuable.

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