

Rabies Risk and Compliance with Pre-travel Rabies Advice

A prospective cohort study

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No conflict of interest

Sponsoring to assist congress: Sanofi Pasteur, GSK

Fee for travel health training: Sanofi Pasteur, GSK

Other relations with pharmacy: none


Contribution to research: none

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This presentation

1. Background
2. Methods
3. Results
4. Conclusions



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Background

Increasing need for Post Exposure Prophylaxis:

- Travelers have to be educated on rabies
- High risk travelers need pre-travel vaccination

Do travelers comply with our recommendations?  
Who exactly are high risk travelers?



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Parties involved

- Several public health authorities
- Leiden University Medical Center

Funding: Netherlands Organization for Health Research and Development

Prospective Cohort Study

Retrospective Case – Control Study

Cost Evaluation Study

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Methods

Travel clinic visitors to high risk destinations

3 Travel Clinics:

- GGD Utrecht: Atie Pijtak
- GGD West Brabant: Godelief van den Hoogen
- GGD Hart voor Brabant: Mieke Croughs

Inclusion: September 2017 - May 2018


Web based questionnaire 1 week after return

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### Study objectives

1. Incidence of rabies exposure  
*Exposure = category II or III injury*
2. Compliance with recommendations
  - > to stay away from possibly rabid animals
  - > to seek medical advice in case of exposure

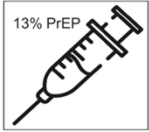


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### Participants

- 980 participants (response 38%)
- 50% destination Asia
- median age 35
- median trip duration 17 days



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### Incidence of exposure

1% bitten or scratched by a potentially rabid animal

Incidence per age group:

< 16 y:	6%
16 – 25 y:	3%
26 – 35y:	2%
> 35 y:	0



Not enough cases to determine predictors of exposure

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### Compliance with advice to stay away from animals

59% ≤ 1 arm's length of a dog, cat, monkey or bat

Dog	Cat	Monkey	Bat
47%	31%	24%	5%


On local markets, in wildlife parks, while hiking or in monkey temples

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### Reasons for proximity: own behavior

- 29% stroked it
- 24% entered its territory
- 12% fed it
- 13% was curious
- 9% played with it
- 3% took care of it



Compliance with advice to stay away is low

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### Reasons for proximity: independent of own behavior

- 56% it simply came to me
- 15% it wanted my food
- 12% it was not possible to avoid it




Difficult to stay away from animals

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Multivariate logistic regression: predictors of proximity

Trip > 60 days	OR 14.1
Age 0-15 years	OR 5.1
Monkey park	OR 4.7
Hiking > 1 day	OR 2.3
High education	OR 2.1
Touched animal previous trip	OR 2.1




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Multivariable logistic regression: protective predictor

Business trip: OR 0.4




Destination, biking, gender, ethnicity, VFR, pet owner, fear or loving animals, visit of local market, wildlife park or cave = no independent predictors

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Compliance with advice to seek immediate medical help


45% did not seek medical help after exposure!



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Conclusions



1. Rabies exposure is high, despite pre-travel advice
2. (Young) Travelers do not comply well with rabies recommendations
3. High risk = young age - long trip duration - monkey park visit

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Thank you for your attention!

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