about efficacy of conventional medicines. But this answer might still be false in his particular case. Other factors, like correct diagnosis, genetic susceptibility and comorbidity, also determine if the medicine works. The diagnostic process preceding the prescription is Bayesian and renders the probability of a specific diagnosis.

Bayesian philosophy is about learning from past experience, e.g. about characteristics of patients responding well to specific medicines. Like a medical diagnosis, the choice of a homeopathic medicine is a Bayesian process. Different personal characteristics add up, stepwise increasing the chance that a specific homeopathic medicine will work.

Hitherto homeopathic doctors have been using Bayesian statistics implicitly: characteristic symptoms pointing towards a specific medicine occur more frequently in patients responding well to that medicine than in patients responding to other medicines. It is a small step to make this rule explicit in various types of research and data collection. All we need to know is the prevalence of a symptom in the population responding well to a specific symptom and in the remainder of the population. The ratio between these two is called the Likelihood Ratio (LR).

The research we need is accepted in conventional diagnosis research. Like all kinds of research we will have to deal with possible bias; like our reference standard: what is a good result? Symptoms should be defined more accurately, etcetera. These problems have been neglected in the past. We must realise that this research is meant to improve homeopathy, not to prove it. However, improved homeopathy will render better proof.

Several methods for Bayesian assessment of symptoms are demonstrated. The most valid and time-consuming method is prospective research of a small set of symptoms, but even with this method we can achieve a tremendous scientific improvement of homeopathy within a limited amount of time. Within ten years we could know LRs of characteristic symptoms for our most frequently prescribed homeopathic medicines. Applying the formula that goes with Bayesian theory we will be able to tell the patient: "Based on the symptoms you gave me I expect the chance that medicine A works for you to be x%".

Keywords: Clinical research, research methodology

Protocol for prevention and treatment of dengue fever and its complications

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Background: Dengue virus (DENV) currently infects 50-100 million people/year, causing about 500,000 cases of severe complications (dengue haemorrhagic fever; dengue shock syndrome) and 20-25,000 deaths. From USD 1.35 billions/year Brazil spends in dengue, USD one billion is allocated to the vector control programme. All attempts at control of the mosquito vector have systematically failed, and there is no specific treatment or vaccine currently available. Homeopathy has a long record of success in the treatment of epidemic diseases. Although recent experiences pointed to the possible efficacy of homeopathic prophylaxis and treatment in dengue, with low cost, satisfactory acceptance by the targeted population, and lack of adverse events, clinical trials reported controversial results.

Aim: To assess the effectiveness of homeopathic intervention in the prevention and treatment of dengue fever.

Study design: Multicentre study including Brazilian counties with high incidence and prevalence of DENV infection, and where primary healthcare staff include homeopathic doctors. *Stage 1*: Training of multi-professional staff and preparation of infrastructure. *Stage 2*: Selection of the epidemic medication by an expert panel based on the signs and symptoms exhibited by 20 confirmed cases. *Stage 3—Prophylaxis*: will include all 18-60 year-old individuals spontaneously visiting the participating centres; sample size: 500/group to detect minimum difference of .132 with α=.05, power=.8, 1:1 randomisation. *Stage 4—Treatment*: will include 18-60 year-old individuals with notified dengue, presenting with muscle pain and headache until disease day 3, and available for blood sample collection at the beginning and end of the study; sample size: 120/group; α=.05, power=.8; estimated effect=20%, 1:1 randomisation. Exclusion criteria: mental disorders, pregnancy. Exit criteria: disease complications. In *Stages 3 and 4*, the epidemic medication will be randomly administered to 50% of the exposed population; the other 50% will be given a placebo. *Stage 3*: 1 single dose of dilution 30cH. *Stage 4*: medication/placebo in dilution 30cH every 4 h for 2 days and every 8 h for 5 days. Both staff and volunteers will be blinded as to the treatment given. Variables: clinical; laboratory (CBC; NS1 antigen; IgM/IgG).

Outcomes: *Stage 3*: reduction of the number of dengue cases in the exposed population according to the study records and reports by governmental sanitary surveillance agencies. *Stage 4*: reduction of the intensity and duration of muscle pain and headache; use of analgesics (type and amount); number of days off work/other activities; end of fever; changes in risk grade (A to D).