Investigation of Therapeutic Behaviour of Rare Disease Patients

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Summary

For inherited retinal diseases like retinitis pigmentosa no evidence-based treatments exist. Hoping to stop the natural progression of their blinding disease, many retinitis pigmentosa patients try nutritional supplements like fish oil, vitamins, anti-oxidants, Chinese herbs etc.

Similar natural, alternative or complementary treatments are also available for other rare diseases (e.g. acupuncture, “Cuba Therapy”, hyperbaric oxygen therapy, etc.). Indeed, this accumulation of different individual treatments during the lifetime of a rare disease patient results in a risky therapy trial career with uncertain medical guidelines and changing therapeutic behavior patterns. Since there trials are rarely monitored systematically by clinicians or doctors, patients are exposed to numerous risks and safety hazards (e.g. due to overdoses, interaction or adverse side effects of different treatments). A research project investigating the long term therapeutic behaviour of rare disease patients is therefore urgently needed.

If your patient organization wants to participate in such a EURORDIS project please contact: Rob Camp (rob.camp@eurordis.org), François Houyez (francois.houyez@eurordis.org), Rainald von Gizycki (rainald.vongizycki@charite.de).

Overview

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- Guiding Hypothesis
- Anecdotal Data on Therapeutic Behaviour of RDD patients
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  - ITC – Typology of Therapeutic Behaviour
  - Consequence for QoL
  - Sharing of Patient Experiences
  - Meager Scientific Evidence
  - Examples of prescriptions
- Project Proposal
  - Background
  - Objectives and Benefits
  - Methodology and data collection
  - Project Management
- Topics for Discussion with Patient Representatives

What is Therapeutic Behaviour?

- Includes all kinds of activities by RD/IRD patients (Rare Diseases/ Inherited Retinal Diseases) and their relatives based on the expectation that they will result in a positive impact on the natural progression of the (e.g., retinal) disease. Hence, all treatment- and prevention-related measures are included

Nota Bene: Drugs are available for only about 6% of RD patients (Spanish survey)

Guiding Hypothesis

- Because of little scientific evidence for most non-mainstream treatments, many RD patients embark on activities to slow down, stop or reverse the natural progression of their disease
- There is no systematic monitoring by clinicians or doctors, and as a rule no data about risks and benefits; therefore no guidelines come out

Hypothesis

- RD patients show a pattern of therapeutic behaviour that can be characterized as “experimental trial behaviour” in a situation of informational and behavioural uncertainty

  – *Research projects can be initiated by rare disease patient organizations aimed at the collection and analysis of data on patients’ long-term individual therapeutic behaviour*

Anecdotal Data on Therapeutic Behaviour of IRD patients

- Prevalence of inherited retinal diseases (IRD)
  - Major cause of blindness in adulthood in Europe
  - Prevalence of retinitis pigmentosa: 1: 3 000 to 1 : 5 000

    (between 100 000 and 200 000 in EU 27)
  - More than 150 subforms of IRD
  - No authorized treatments available

Anecdotal Data IRD

- Individual Therapy Trial 'Career' (ITC) of a Retinitis Pigmentosa patient
  - Start (1980s): Acupuncture, vitamins, ENKAD, ozone therapy
  - Later: "Cuba therapy", vitamin A palmitate, vaso-dilators, Chinese herbs, live cell therapy, hyperbaric oxygen therapy (HBOT)
  - Today: RetinaComplex, lutein/zeaxanthin, fish oil, valproic acid, curcumin/curry, transcorneal electrical stimulation of retina (Okuvision)
  - Nutrition: fish, spinach, blueberries, red wine

Typology of ITC patients

- Certain types of therapeutic behaviour seem to characterize IRD patients' lives
  - Sympathiser
  - Nihilist
  - 'Once-for-all' type
  - Evidence seeker
    - "It is terrifying that my Omega-3 (500 mg per day) and vitamin A intake were much too high resulting in the acceleration of the decline of my visual acuity"
  - Suppression type
  - Curiosity type, etc

Consequences for quality of life

- doubtful expenditure
- everyday stress
- adverse drug effects
- non-compliance with clinical recommendations
- interactions with other medicines
- no individual endpoints
- emotional pressure by family/friends
- uncertainty about impact on disease progression (e.g., worsening of visual field)
- illegal procurement of product

Sharing of Patient Experiences

- Discussions in disease-specific patient groups, discussion lists, etc, are often characterized by
  - hopeful rumors
  - non-validated information
  - doubtful advice
  - helpful consultation
  - outcries of despair and frustration (emotions)

Meager Scientific Evidence

- Scientific disputes about CT methodologies prevent clear recommendations or guidelines:
  - the size of the CT is too small
  - the data is unreliable (not gathered scientifically)
  - the results of some CTs have remained inaccessible
  - more 'profitable' disease groups are targeted, etc (fenretinide: cone rod dystrophy vs. dry AMD)

- *Chader: Nutritional Research – is one of seven research areas of the US Foundation Fighting Blindness (RI Conference, Hamburg 2012)*
- *Berson: One 3 year clinical study has shown for first time the effectiveness of combined vitamin A and fish oil treatment for reducing significantly (by 40%) a decline of visual acuity*
- *Romero 2009: Positive impact of antioxidants on visual field development*

Examples of prescriptions by clinicians

- Héon (Canada): RetinaComplex
- Berson (Harvard Univ.): 15000 IU vitamin A palpitate plus fish oil or fish diet
- Heckenlively (USA): 25000 IU beta carotin
- Dagnelie (USA): 40 mg p.d. Lutein to begin with, 20 mg Lutein later
- German clinicians: Some prescribe vitamin A, others fish oil or antioxidants, if IRD patients insist
- No reimbursement by health insurance due to lack of evidence and obligatory guidelines

Project Proposal

Background:

- Eurordis Position Paper: *Health care priorities for 8th FP of EC (2013-2020), Chapter 3.4.: Natural, Alternative, Traditional, Complimentary (NATC) treatments for rare diseases.* "It is urgent to perform this type of research as these results are needed by specialists to generate new data for innovative practices of care and to agree on what optimal treatment strategy should be applied for a specific rare disease."
- *2013 EPF Nutrition Conference, Dublin 2013 (Case-Study: Pain reduction in poly-arthritis by nutritional supplements)*

Proposal

Objectives and Benefits:

- Generation of evidence on NATC-related therapeutic behaviour of RD patients
- Increase safety and certainty of therapeutic behaviour
- Improvement in patient care by doctors, and quality of life
- Stimulation of specific NATC-related clinical projects
- Establishment of evidence-based guidelines and recommendations

Proposal

Methodology and data collection:

- Literature search
- 3-point survey
- Interviews and online questionnaires
- Target groups: RD patients, clinicians, doctors, pharmacists; possibly representatives of pharma

Proposal

Project Management:

- Project Leader: Eurordis
- Participants: Disease-specific Eurordis member organizations on national and/or European level
- Duration: 3.5 years
- Funding: European Commission, National Health Ministries, private foundations

Discussion

Do you agree with the “Guiding Hypothesis”?

What are your disease-specific experiences with treatments and therapeutic behaviour of patients? What roles do/should healthcare providers and patient representatives play with regard to NATC-related treatments?

Would you participate in a NATC-related project on a national or European level together with Eurordis?

Next Steps?

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