« What do you want to do later ? »

Detection of serious infections in children thanks to Gut Feeling !

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Actual Context

- In General Practice, an important part of the assessments concerns children
- Lots of situations in General Practice leads to uncertainty (Marburg declaration)
- The parental concern is an important element to consider

History

- Pluis / Niet Pluis concept in NDL (since 2004)
- Enquiry in 2006 by emails in order to know if the sensation of alarm is common : YES => description of body sensations
- GUT FEELING
- Sense of alarm / sense of reassurance with consensus statements

History

- Hier stimmt was nicht !
- Translation in France P/NP « Ca colle, ça cloche » M Coppens with DELPHI procedure
- Transculturality of GF

History

- Safety netting approach by Thompson et al. (2006) : half of the case of meningoccocal diseases are missed by GP in front line

- Thompson propose a safety netting approach if the diagnosis is not certain

- 3 questions : - If I’m right : what do I expect to happen ?
  - How will I know if I’m wrong ?
  - What would I do then ?

History

- Thompson describes high risk situations :

 - Uncertain diagnose with a differential including a severe illness with fast progression

- Certain diagnosis with a possible risk of complication

- Patient with a high risk of severe illness and/or complications

Clinicians' GF about serious infections in children (BMJ 2012)

- By Ann Van Den Bruel, Thompson, Butinx et al.
- Observationnal study in Flanders (Belgium) from 2004
- Primary care settings
- Includes 3890 children from 0 to 16 yo

Clinicians' GF about serious infections in children (BMJ 2012)

3369 children assessed clinically as having a non severe illness

- 6/3369 (0.2%) admitted in a hospital for severe infections
- Severe infections : pneumonia, sepsis, viral or bacterial meningitis, kidney infection, cellulitis, osteomyelitis, bacterian gastro-enteritis

Clinicians' GF about serious infections in children (BMJ 2012)

- GF was present by 2 of these 6 children and by 44 without any severe infections. (LR+ = 25.5 IC95% = 7.0 – 82)

- GF in this article : the authors asked about « a clinical impression » (subjective observation that the diseaese might be serious depending on history-taking, observation, clinical assessment) and if the GF suggest there is something more serious.

- GF = intuitive feeling that something was wrong even if the clinician didn't know why

Clinicians' GF about serious infections in children (BMJ 2012)

- No difference of GF between people > ou < 10 years of experience
- Strongest contextual factor was the parental concern (OR = 36.3, IC95% = 12.3 -107)
- GF raised if medical Hx of seizures
- No influence of temperature with GF
- History of cough or diarrhea tends to low down the value of GF

Clinicians' GF about serious infections in children (BMJ 2012)

- GF push to ask for a specialized opinion or to investigate more

- GF : instinctive response from the clinician in face of the appareance of the child and parental concern

Clinicians' GF about serious infections in children (BMJ 2012)

- Commented by Wacogne in 2013 :

  - doctors have to stay objectives in their decision
  - do not under estimate or overuse the GF
  - optimal decision with all the informations available in the office

Clinicians' GF about serious infections in children (BMJ 2012)

- Commented by Dhaliwal (Going with your gut 2011)

- concept of « black box »
- criticism about the third track approach in GP diagnostic reasoning
- underlines the importance of intuition in medical decision making
- cites Greenlagh : intuition is not the ennemy of EBM

Systematic review and validation of prediction rules for identifying children with serious infections in emergency departments and urgent-access primary care," Health Technology Assessment 2012

Meta-analysis, 2012

- Recurrent problems : underdiagnosing serious diseases potentially dangerous for the child VS saturation of ED ressources

- 1939 articles with 5 terms :severe infections, children, medical history / clinical assessment, lab tests, primary care

- 35 articles selected (34 ED, 1 Primary Care)

Meta-analysis, 2012

- Predictive elements most related to serious infections with children are parental concern and the fact that the clinician thought that « something was wrong »

- PCT and CRP > Blood full count
- Importance of red flags reminded +++

- The absence of red flags doesn’t eliminate with certainty a serious infection and GF would be important to use in that case

Meeting in Paris, January 2014

Participants : Pr Bourrillon (paediatrician), Pr JC Mercier (Paediatric Emergency Medicine), Dr Laurence Baumann, T Pernin

Explaning to the Profs the concept of GF (history + french statements)

Profs recognized the familiarity of the concept (especially with the sense of alarm, less with sense of reassurance)

Profs thought the notion of evolutivity should be added

Meeting in Paris, January 2014

Profs ready to help for the thesis (Robert Debré Paediatric Hospital, ED with GPs, Paediatricians, ED doctors)

Contact made with Pr H Moll in Rotterdam (Paediatric Emergency Medicine)

Possibility of contacts in Europe

Personnal Contact in Australia : Dr Stuart Lewena, Clinical Director, Royal Children’s Hospital, Melbourne, Australia

Research question

In paediatric emergency medicine situations, some valuable articles underline the power of GF

The transculturality of GF has been proven

However, no clear definitions of GF in the articles : some are talking about intuition / GF / something was wrong / black box

Research question

It would be interesting to harmonize the langage of researchers in paediatric emergency medicine situations so that further articles are talking about the same things

Questions : - concept transferable to specialist ?

- Focus group ?

- DELPHI with mondial experts ? (sending the GP consensus about GF and maybe create additionnal criterias)

Research question

GF with triage nurses ?

Maybe possibility to study it at Gustave Roussy Cancer Campus in Paris (complicated diseases, uncertainty +++) : Group Focus ?

Thank you

For your attention and your smiles