Ýmsir almennir smitsjúkdómar barna

Ýmsir almennir smitsjúkdómar barna

- Skarlatssótt
- Hlaupabóla
- Einkirningasótt/mononucleosis
- Mislingar
- Roseola/mislingabróðir/6th disease
- Fifth dissease
- Hand- foot- and mouth disease
- Herpangina
- Kik(Kig)hósti/Pertussis
- (Rauðir hundar, hettusótt, barnaveiki, polio)

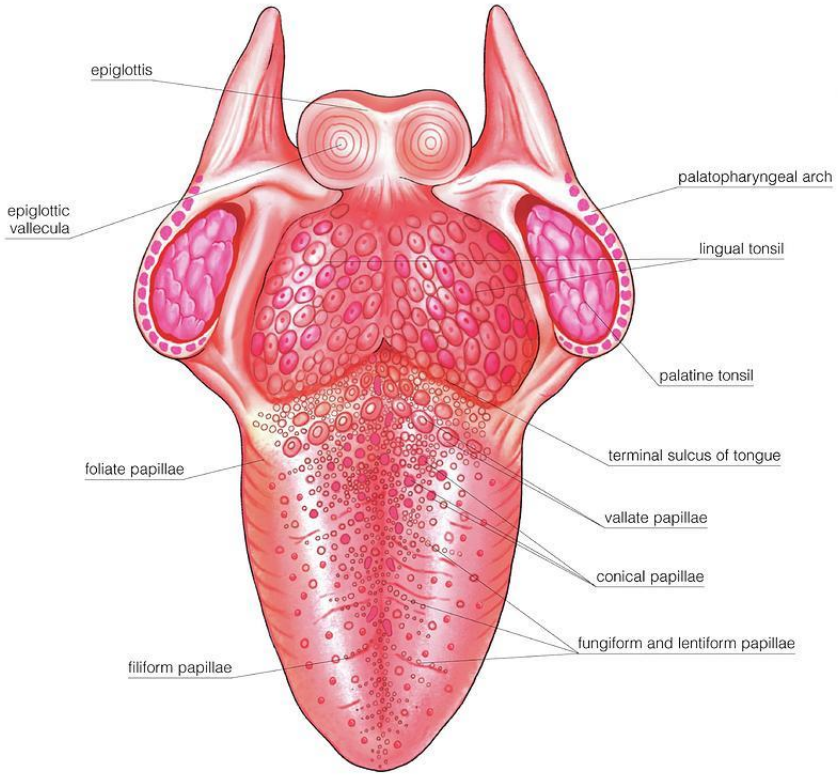
Skarlatssótt

(scarlatina, scarlet fever)

- β-haemol str. Gr A (nokkrar typur)
- Meðgöngutími 1-7 dagar
- Hálsbólga, ýmis einkenni
- Bólgnar tons, oft exudat, stundum erythema og/eða petecchiur á palatum molle
- Tunga í upphafi hvít með papillum, seinna rauð með papillum (i.e. white and red strawberry tongue)
- Perioral pallor og roði í andliti
- Útbrot dreift erythema með örfínum dökkrauðum deplum, sandpappírsáferð. Byrja á hálsi, nárum og axilum.
- Útbrot í 3-5 daga, óháð Pc gjöf
- Rx Penicillin í 10 daga
- NB: febris rheumatica og post str glomerulonephritis

Skarlatssótt

Skarlatssótt



Skarlatssótt

Skarlatssótt

Rx: Penicillin

(alt.: ampicillin)

Skarlatssótt

Aukaverkanir

Asymptomatic nasopharyngeal carriage rate of GAS in Icelandic children

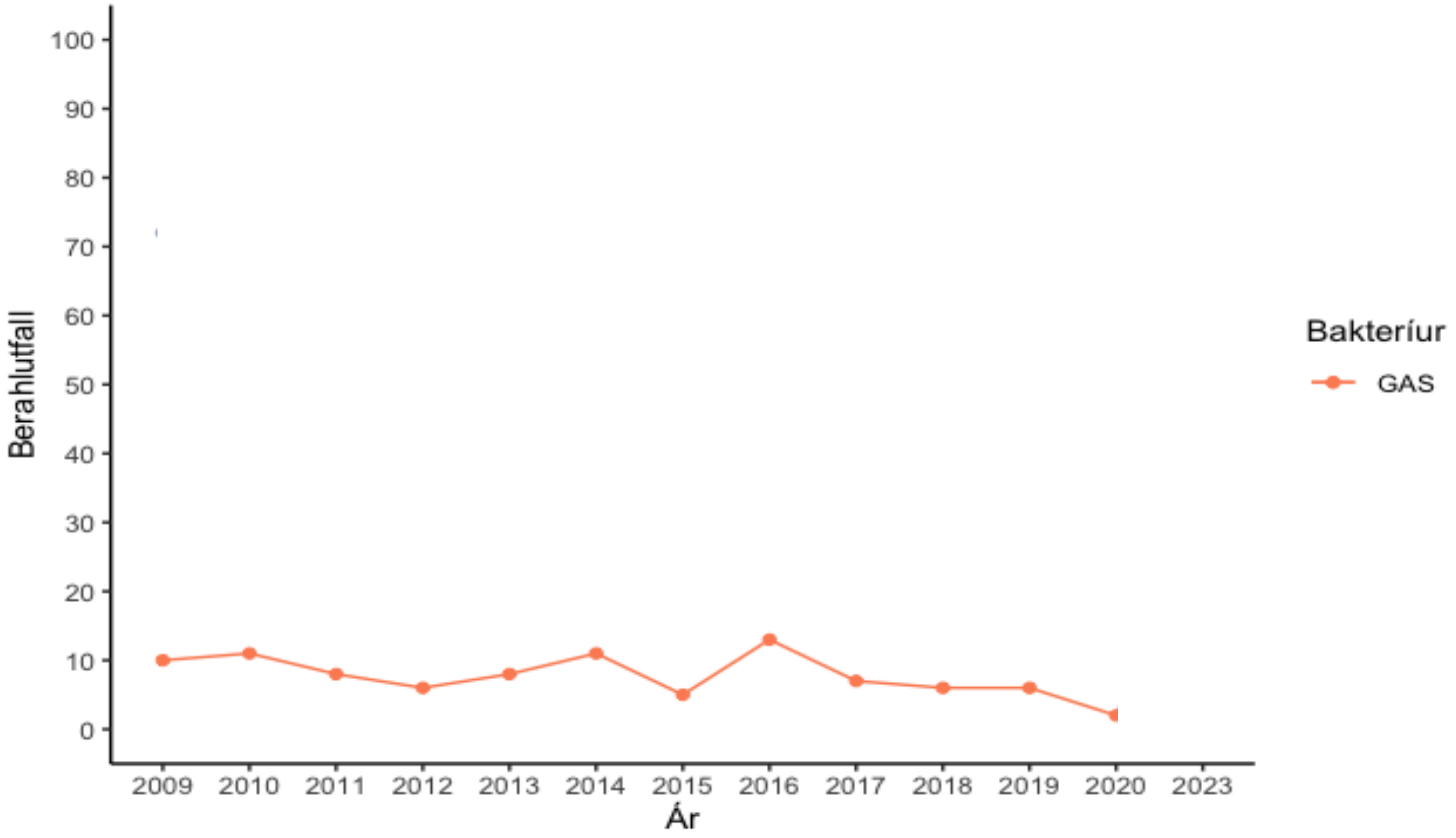
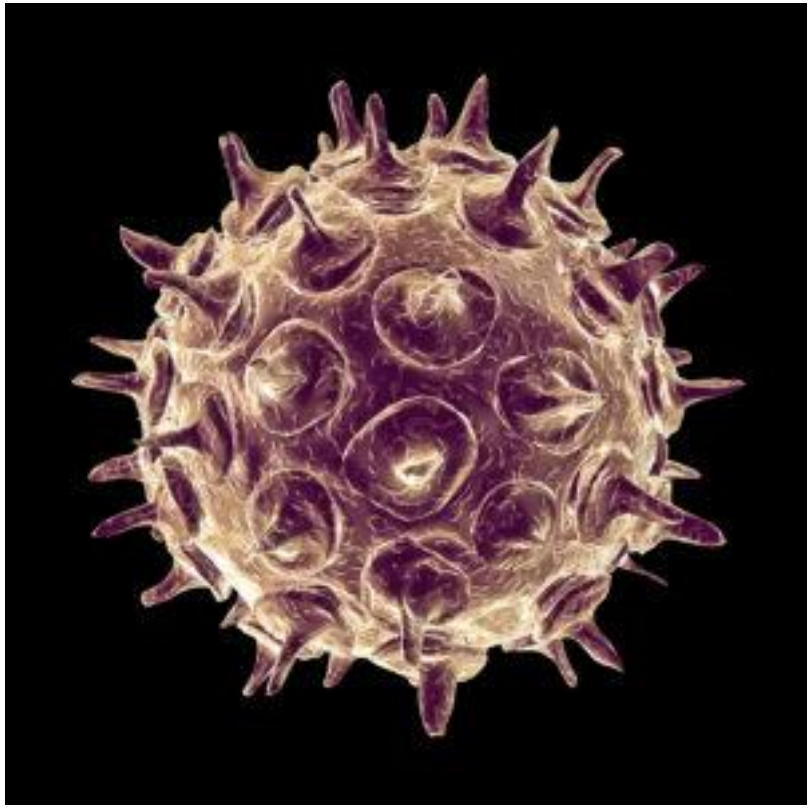


Figure 3. Asymptomatic nasopharyngeal carriage rate of GAS in Icelandic children attending day-care centres between the years 2009-2023. No samples were collected 2021 and 2022 due to Covid-19 pandemic.

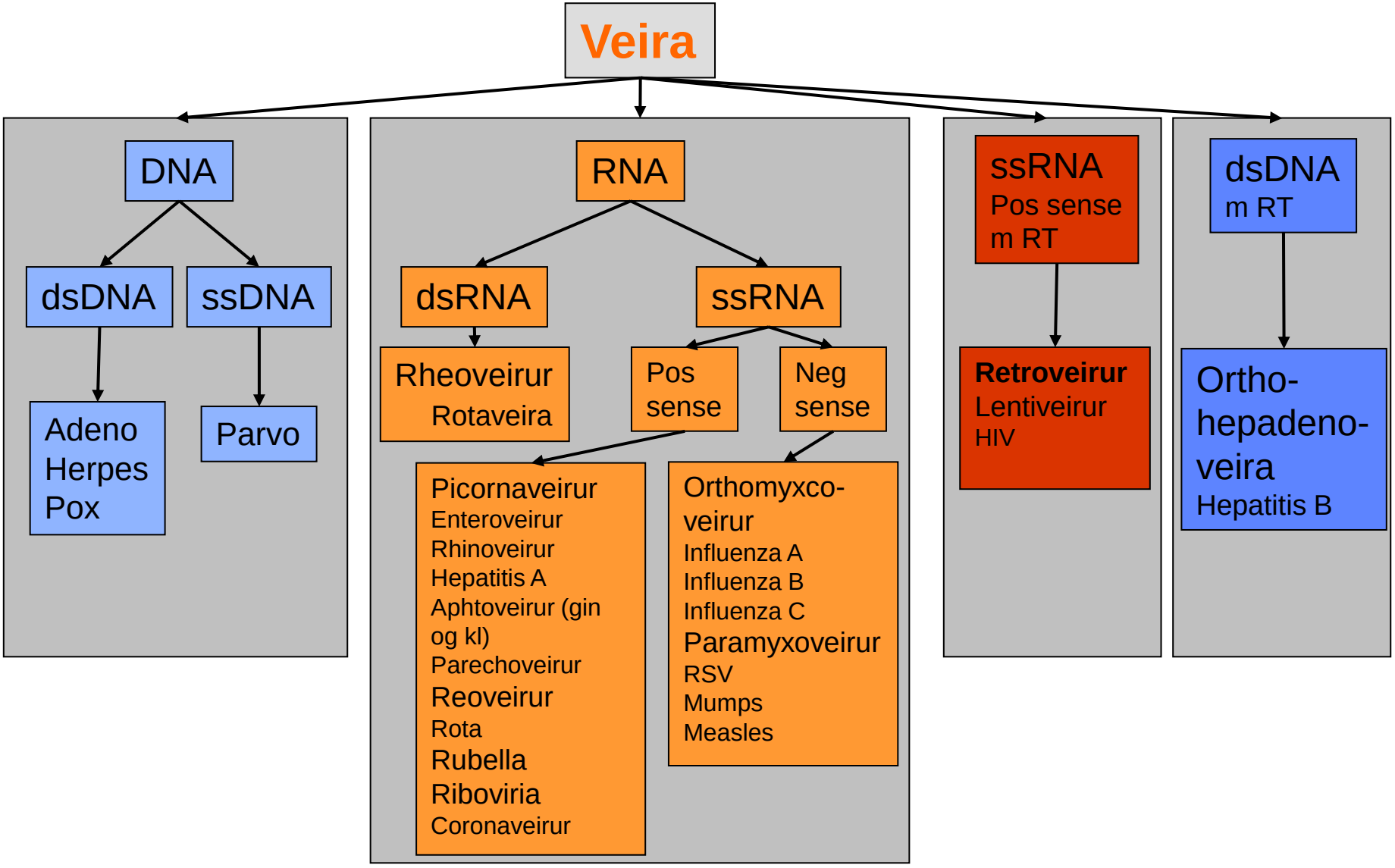
Hlaupabóla

(varicella, chickenpox)

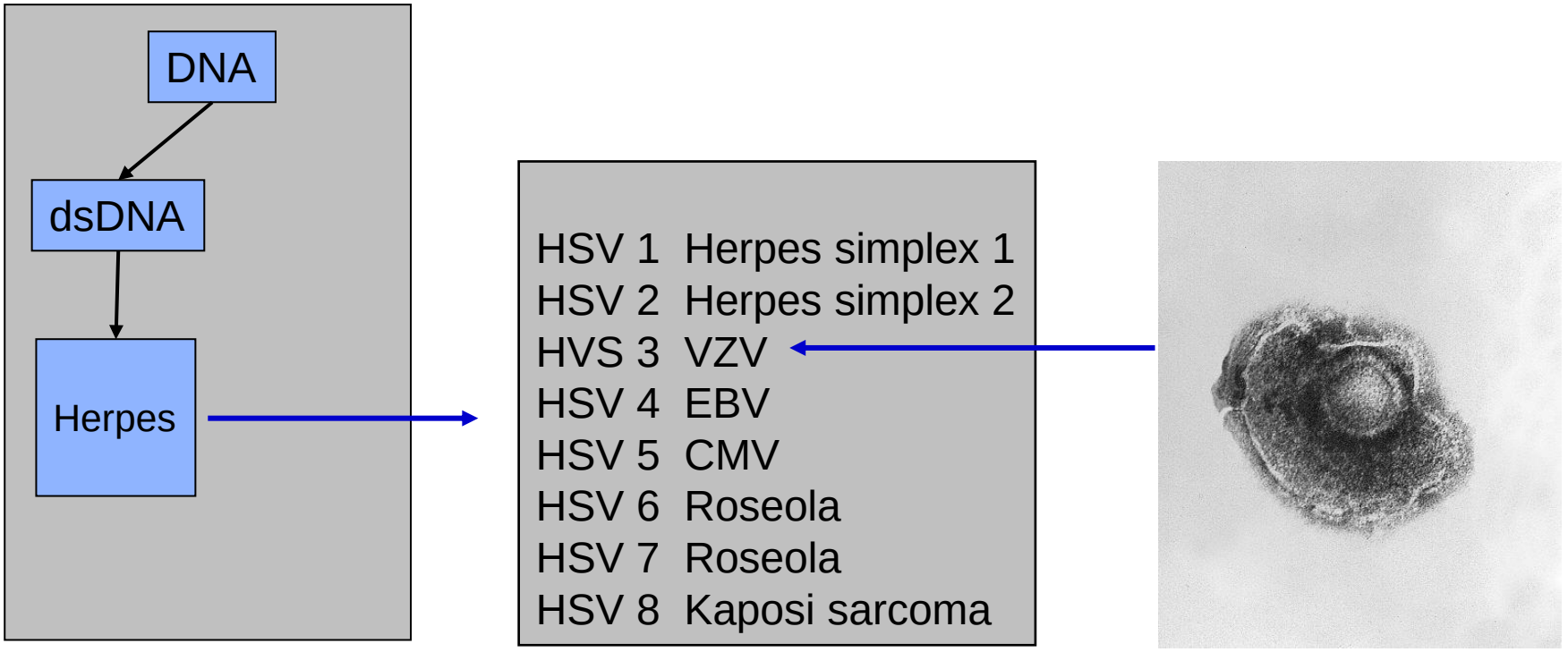
Upprifjun í veirufræði .... !!!



Veiruflokkun (Baltimore)



Veiruflokkun



Hlaupabóla

(varicella, chickenpox)

- HHV 3, varicella zoster virus (human herpes virus)
- Hálssærindi og hitavella í upphafi

- Meðg. 4-16 d (allt að 21 d).
- Prevalence: við 12 ára hafa um 90% fengið hlaupabólu
- Smita 1-2d f útbrot og þar til lesionir eru þurrar (vika)

- Útbr: ávalar lesionir
- Macula →papula →vesicula →pustula →crust **(sjást allar í einu)**

- Ath hársvörð, munn/slímhúðir, lófar/iljar.
- Centripedal dreifing, birtast á 3-5d, mikill kláði

Hlaupabóla

(varicella, chickenpox)

- Alvarlegur sjd fyrir ónæmisbælda

- Sec sýkingar (MTK, öndunarvegir, staph/invas GABS (necrot fasciitis))

- Acyclovir? 20mg/kg x 4 í 5 daga
- V-zoster immunoglobulin (1.0 g/kg) ef snemma eftir smit.
- Rx: ekki aspirin, ath neglur, hreinlæti, kláðastillandi lyf (bað+matarsódi+haframjöl!)

- NB post inf compl. þ.m.t. acut cerebellar ataxia o.m.fl

Hlaupabóla

Hlaupabóla

Hlaupabóla

(varicella, chickenpox)

- Mjög smitandi.
- Fósturskaðar.
- Ekki transplacental mótefni sem gagna. Virkt T-frumusvar nauðsynlegt.
- Fetal varicella i.e. varicella á fyrsta trimestri: fósturskaðar, örmyndanir á húð, útlimaskaðar, chorioretinitis, neurolo. skaðar. Hátt mortalitet.
- Congenital varicella i.e.sýking > 5d fyrir fæð ónæmissvar móður vernda barnið að nokkru, horfur góðar
- Neonatal varicella i.e. Sýking síðustu 5d fyrir fæð eða fyrstu daga eftir fæðingu er umtalsverð hætta fyrir nýburann.

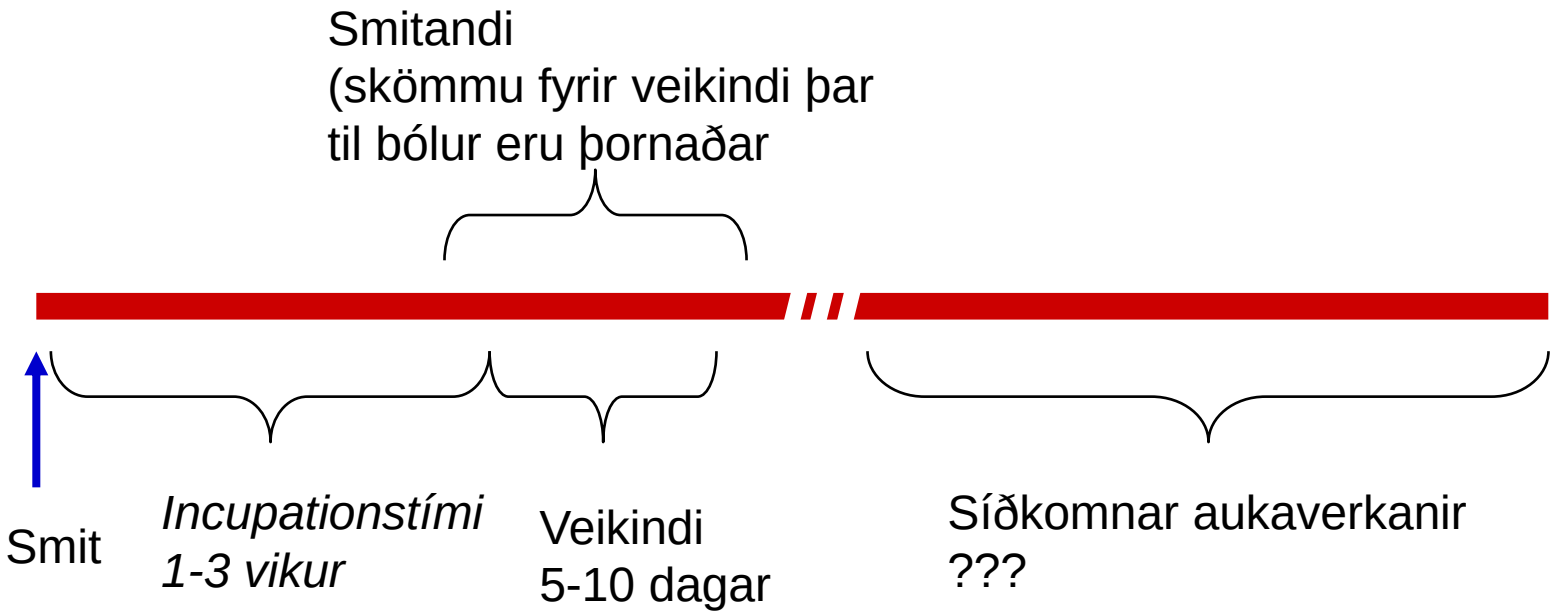
Hlaupabóla - samantekt

(varicella, chickenpox,)

- Meðg. 2 vikur (4 - 21d)
- Smita 1-2d f útbrot og þar til lesionir eru þurrar (vika)
- Mjög smitandi
- Útbr. í hársvörð, munn, slímhúðir, lófar, iljar
- Centripedal dreifing, birtast á 3-5d, mikill kláði
- Macula → papula → vesicula → pustula → crust (allar í einu)

- Sec sýkingar (staph/invasGABS (necrot fasciitis))
- Acyclovir? 20mg/kg x 4 í 5 daga
- V-zoster immunoglobulin (1.0 g/kg) ef snemma eftir smit
- NB post inf compl. þ.m.t. acut cerebellar ataxia o.fl

Smit, sýking og síðkomnar aukaverkanir



Smit á meðgöngu og við fæðingu

Alvarleiki

- Nýburar
- Ungbörn
- Aldraðir
- Barnshafandi konur
- Ónæmisbældir
- Aðrir undirliggjandi sjúkdómar

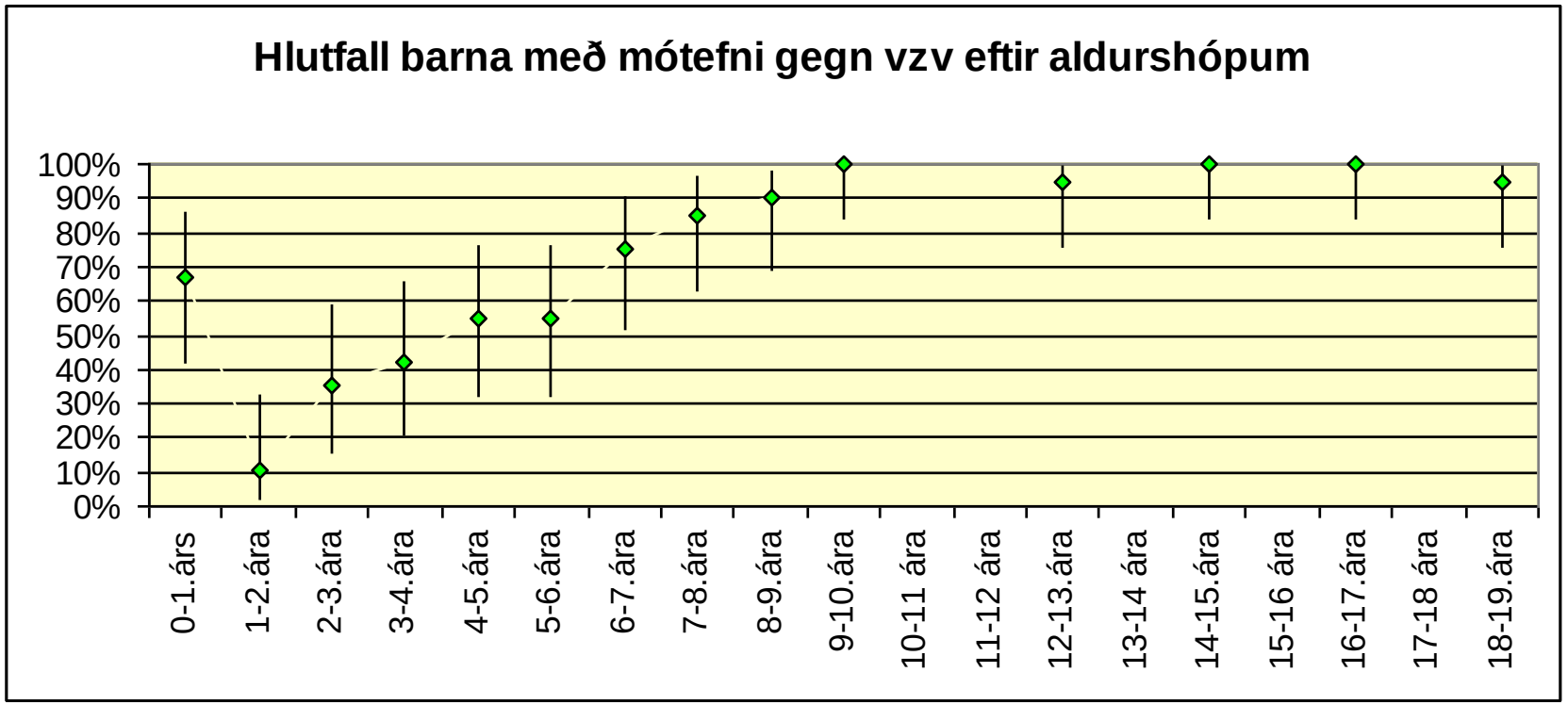
MTK einkenni

- Cerebellar ataxia (approximately one in 4000 cases)
- Meningoencephalitis
- Meningitis
- Vasculitis (getur valdið stróki)

- Annað ??
  - ITP?
  - Neutropeniur?
  - Arthritar?
  - O.s.frv….

Faraldsfræði hlaupabólu og alvarlegir fylgikvillar hennar

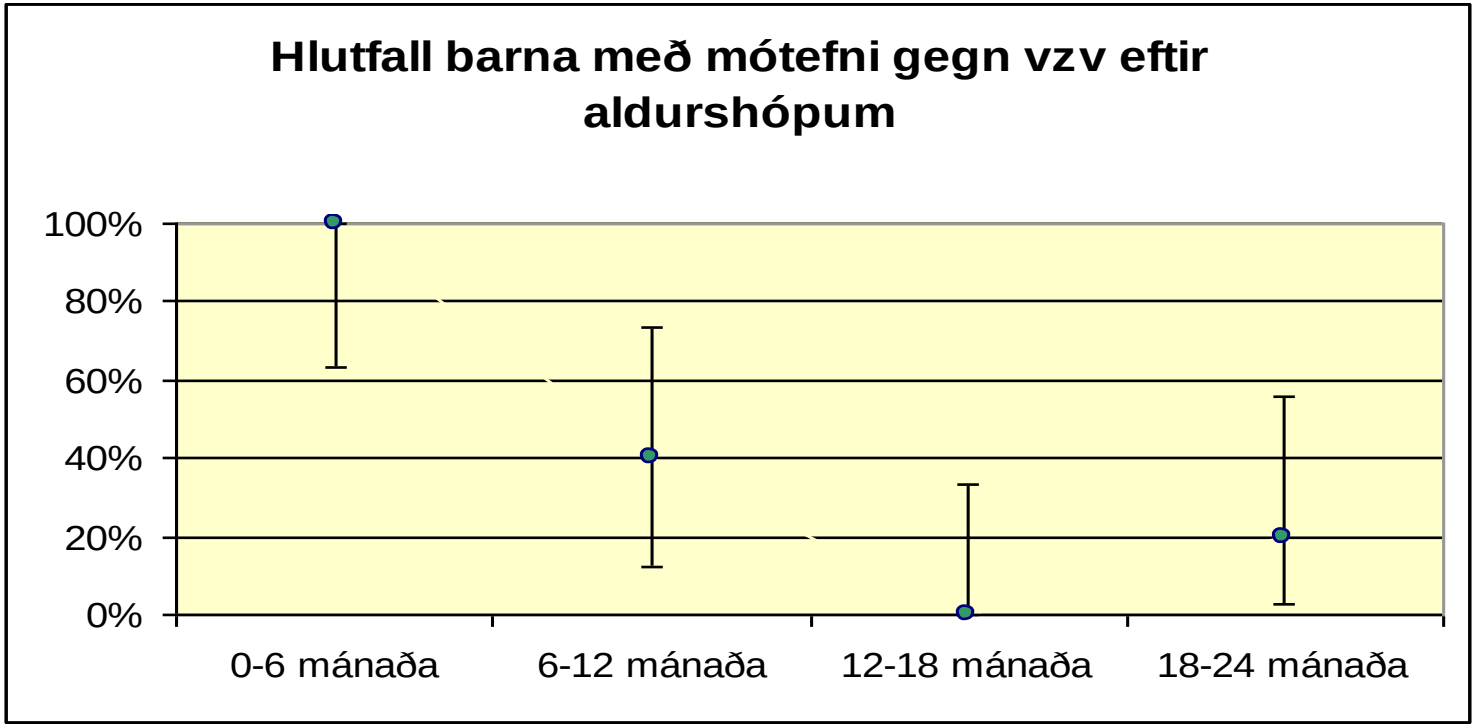
Hildur Þórarinsdóttir, læknanemi



http://www.laeknabladid.is/2009/02/nr/3405

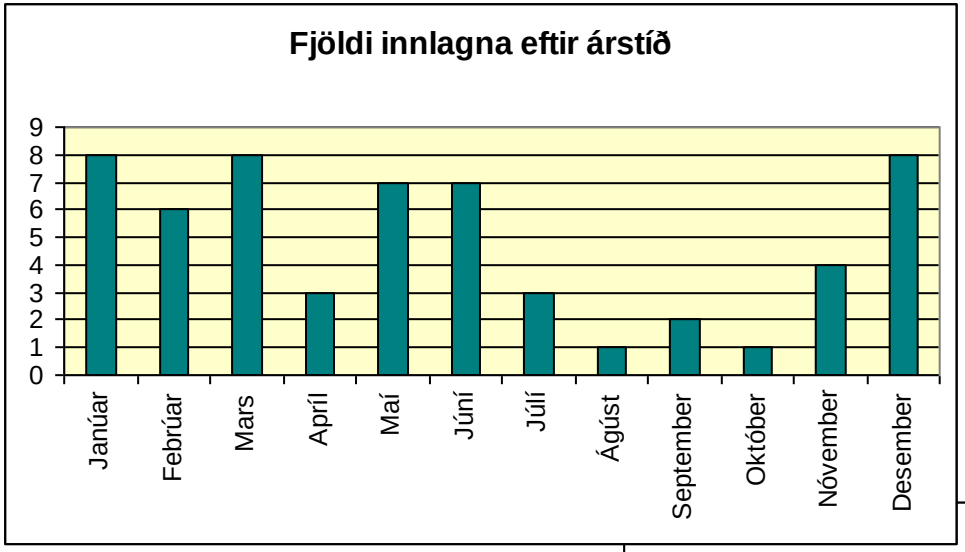
Faraldsfræði hlaupabólu og alvarlegir fylgikvillar hennar

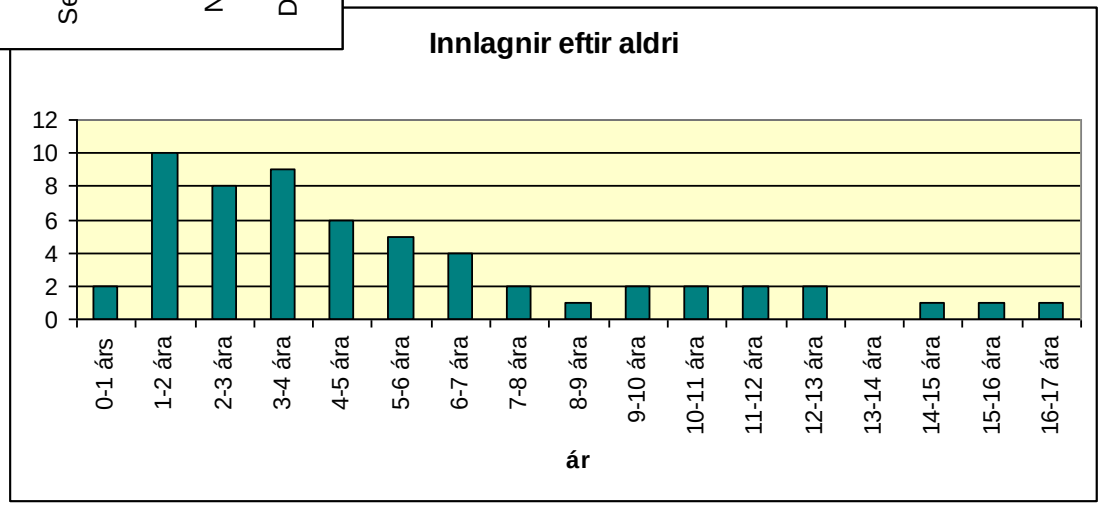
Hildur Þórarinsdóttir, læknanemi



Faraldsfræði hlaupabólu og alvarlegir fylgikvillar hennar

Hildur Þórarinsdóttir, læknanemi





Varicella vaccination

- Verndar gegn hlaupabólu í 85% tilfella
- Verndar gegn alvarlegum evikindum í 97% tilfella

- Japan (> 30 ár)
- USA, 48 af 50 fylkjum (> 20 ár)
- Canada
- Ástralía
- Finland
- Þýskaland …..o.s.frv.

- Ísland frá 2020

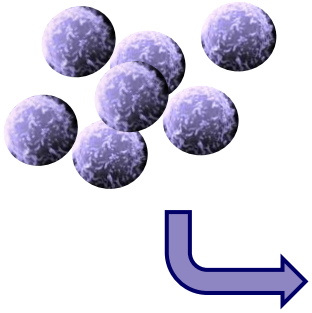
Mononucleosis

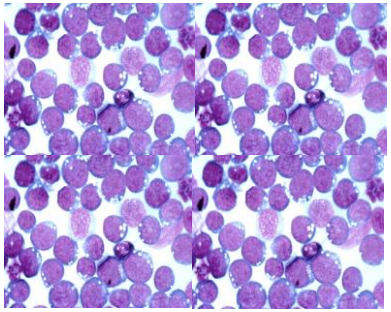
Mononucleosis

- Smitast með munnvatni !
- Meðg 1-2 mánuðir !!!

- Unglingar um 60% seropós, mun fyrr í Afríku og í efnaminni hópum
- Ung börn fá síður einkenni (afar sjaldg sjd í Afríku)

- EBV (Ebstein-Barr veira)
- Sýkir epithel og B-frumur
- Lymphocytosis
- Lymphoproliferative sx (immortalization)





- NB: Tengsl við Burkitt lymphoma/nasophar carcinoma

Mononucleosis

- Einkenni:

- Slappleiki, hausverkur, ógleði, kviðverkir í 1-2 vikur
- Vaxandi hálssærindi og hálsbólga, oft með exudati, stundum petechiae á mótu mjúka og harða góms. Hiti í 80-90%

  - Lymphadenopathia (flestir)
  - Miltisstækkun (50%)
  - Lifrarstækkun (30%)
  - Maculopapular útbrot (5-15%), ef ampi 80% með útbrot !

- Skánar á 2-4v (eða lengri tíma)

Mononucleosis

Greining / rannsóknir

- Atypical lymphocytosisi (>90%),
- Thrombocytopenia (væg) (50%)
- Monospot (ótryggt, einkum <5ára)
- Hækkuð lifrarpróf, eink gGT
- Veirutiterar (IgG og IgM)

Meðferð

- Sterar ????????
- Acyclovir ???
- Stoppa íþróttir e.d. ??

Mononucleosis

Complicationir:

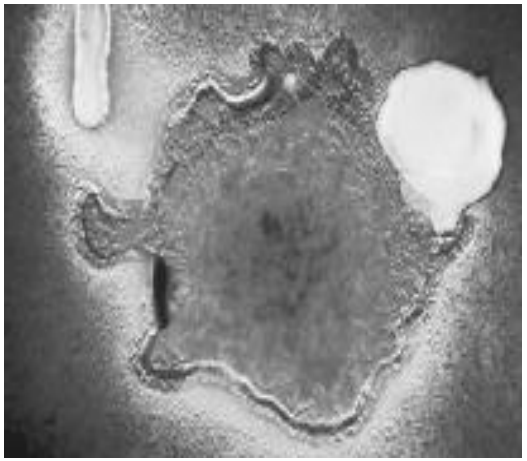
- Splenic rupture
- Neurological
  - Krampar
  - Meningo-encephalitis
  - Ataxia
  - Bell’s palsy, Guillain-Barré sx
  - Alice in Wonderland sx
- Haemol anaemia/trompocytopenia/aplastic anaemia
- Pneumonia/myocarditis/pancreatitis/etc
- B-cell lymphoproliferative sx
- Útbrot ef ampicilline er gefið !

Ampicillin útbrot og EBV

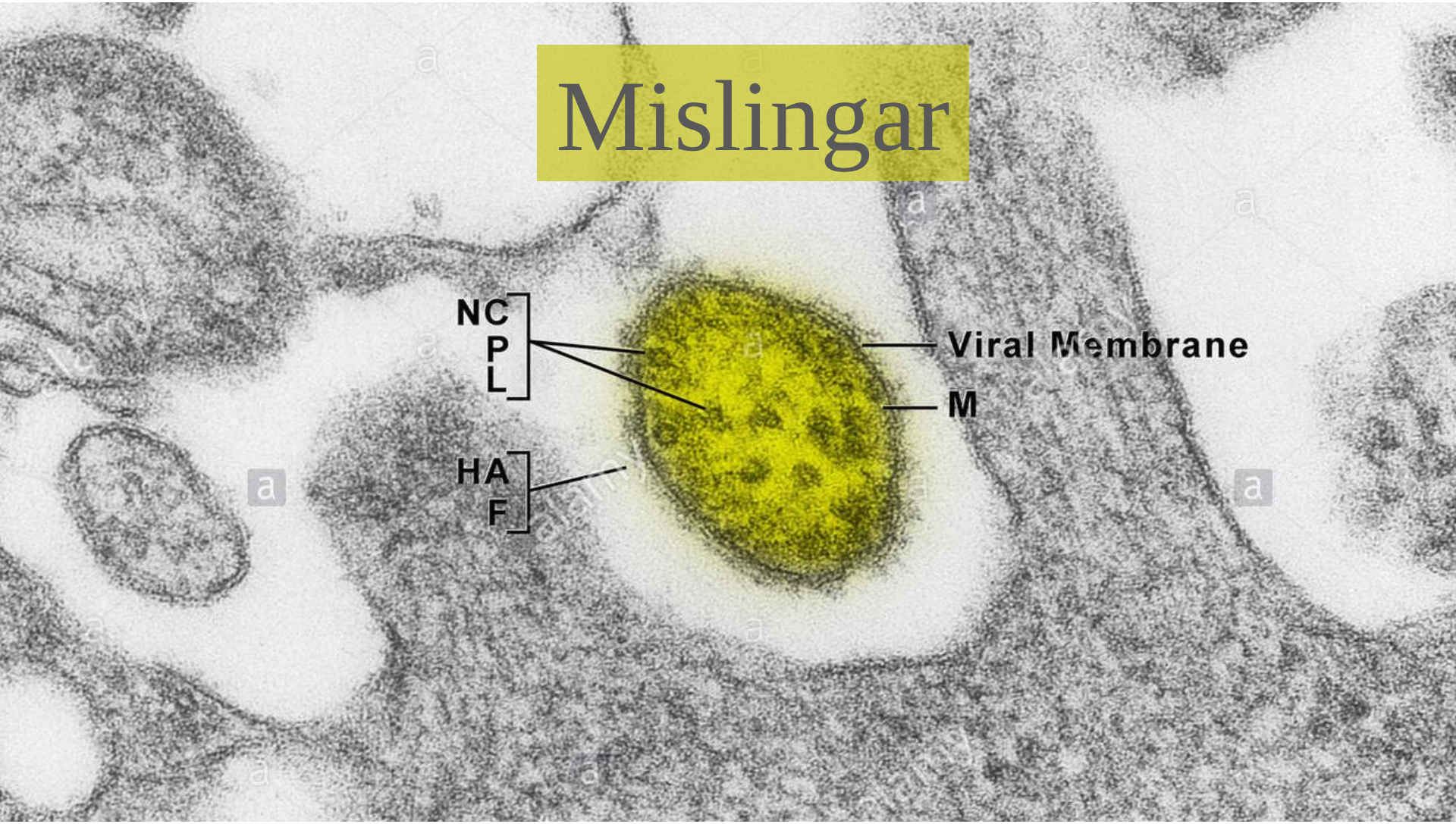
Mislingar - veiran

- Mislingaveiran er af ættkvísl *Morbillivírusa* af ætt Paramyxoviridae

- *Paramyxovírusar* og *Pneumovírusar* tilheyra sömu ætt
- Stór pleomorphic single stranded antisense RNA veira
- Eingöngu í mönnum !!!



Mislingar



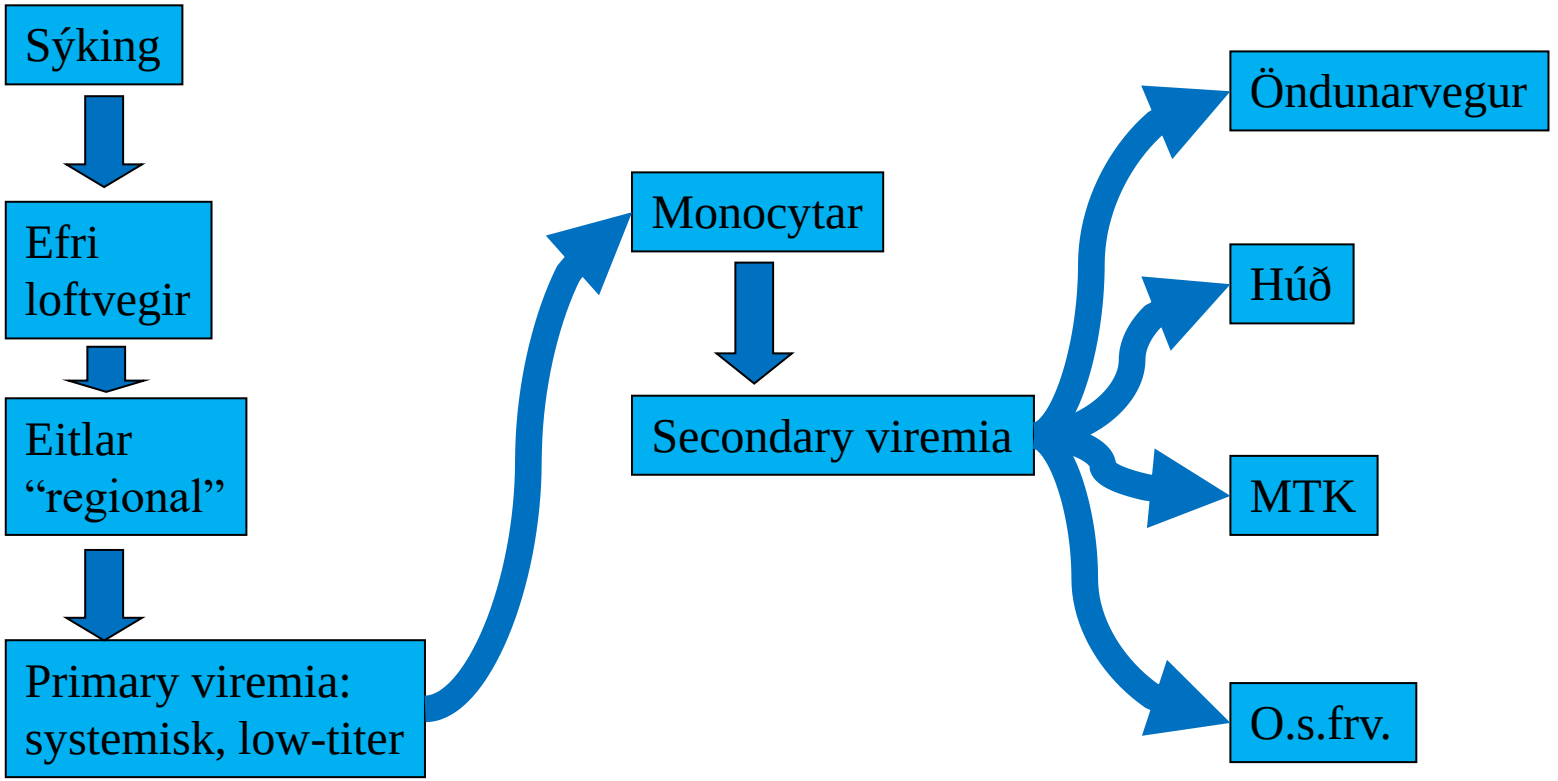
Mislingar

- ✓ Ein helsta ástæða dauða ungra barna í heiminum
- ✓ Er eingöngu í mönnum – ekki í dýrum eða fuglum

Mislingar – meingerð

- Úðasmit.
- Binst CD46 og CD150.
- Sýkir epithelfrumur í öndunarvegi og dreifist þaðan með lymphocytum um blóðrás til reticulendothelial kerfis og áfram um líkamann.
- Veldur alvarlegum öndunarfærasýkingum, MTK sýkingum, blindu, sýkingum í epitheli …..
- Intracelluler fjölgun og syncitia myndun og kemst þannig fram hjá vessabundna ónæmiskerfinu.
- Aðallega með frumubundnu ónæmissvar sem á einnig þátt í einkennum.

Mislingar - virusinn



Gangur sýkingar

Klassískir mislingar fara í gegnum fjögur stig:

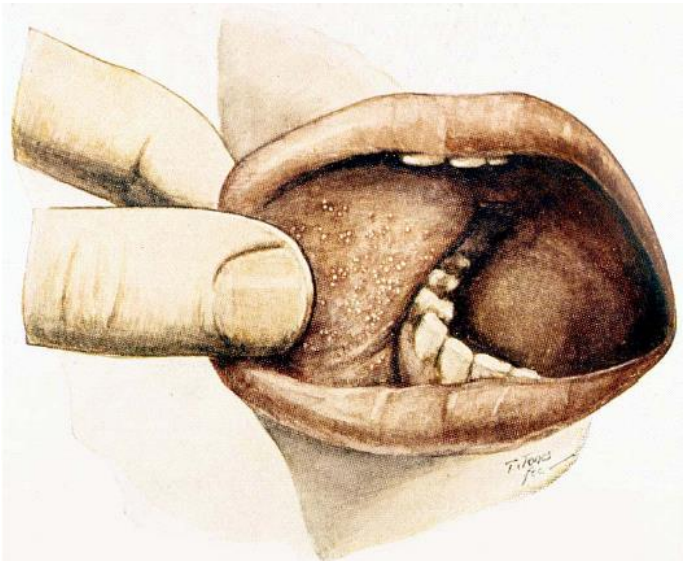
- incubation
- prodrome
- exanthem
- recovery stig

Mislingar - útbrot

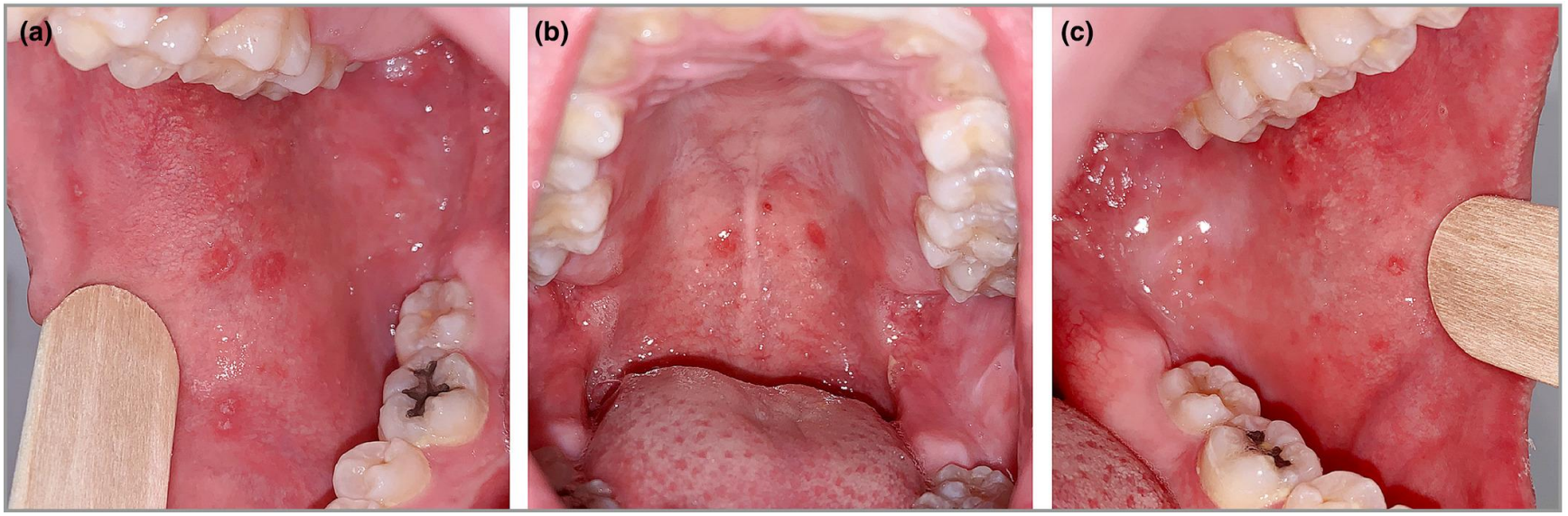
Mislingar

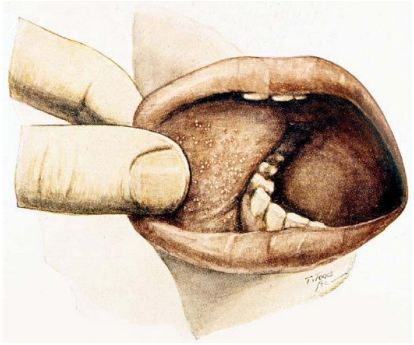
Mislingar

Mislingar

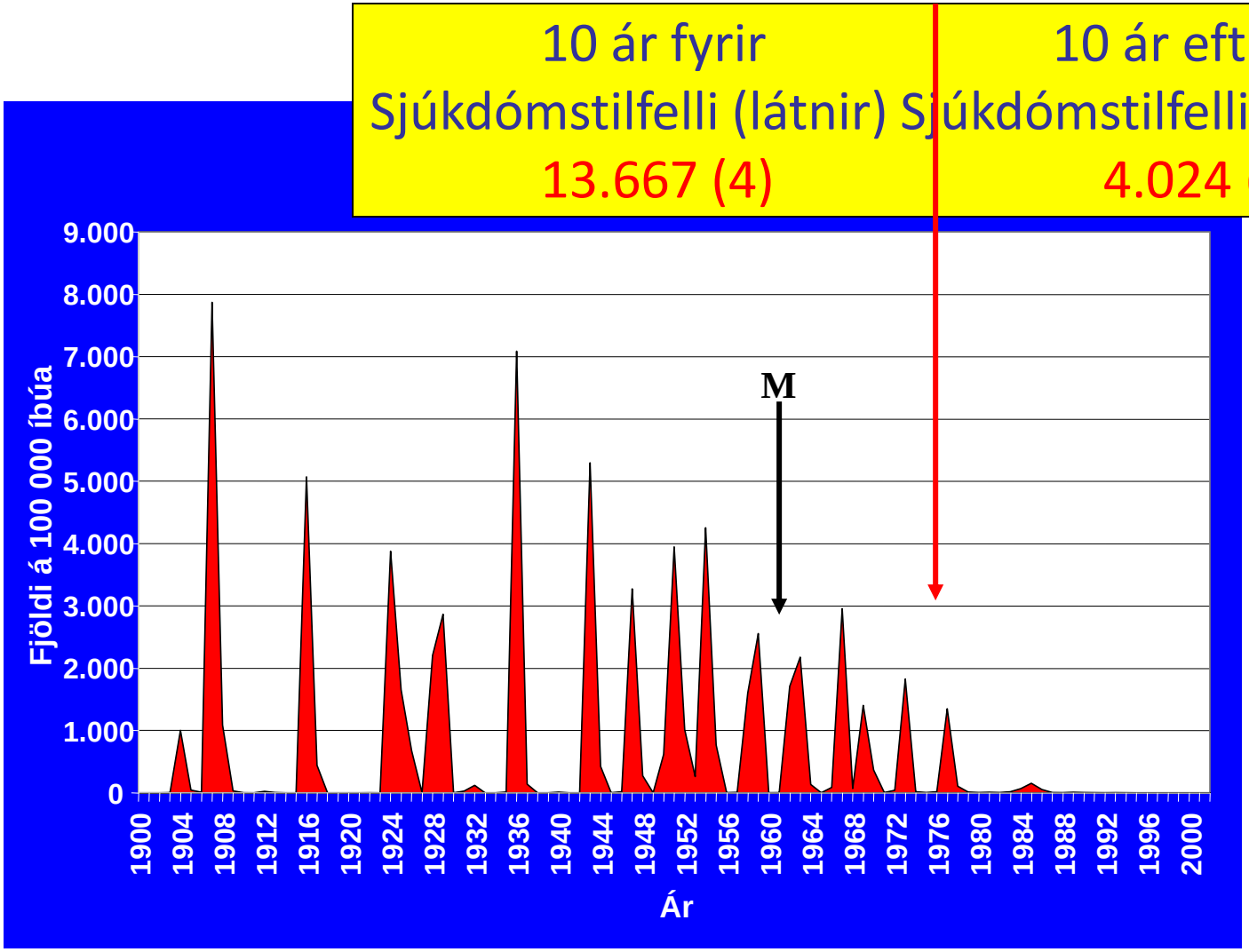


Mislingar





Mislingar á Íslandi



gegn
jast hér á
960

- **1976** Bólusetningin tekin upp við 2 ára aldur
- 1989 Bólusetning tekin upp með bólusetningu gegn rauðum hundum og hettusótt við 18 mánaða aldur
- 1994 Ákveðið að endurbólusetja við 9 ára aldur
- 1.7.2001 Endurbólusetning færð frá 9 ára til 12 ára gamalla barna
- Síðasta tilfelli (1) greint 1997

Frá Þórólfi Guðnasyni

Andrew Wakefield

The Lancet, feb 1998

Early report

Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

A J Wakefield, S H Murch, A Anthony, J Linnell, D M Casson, M Malik, M Berelowitz, A P Dhillon, M A Thomson, P Harvey, A Valentine, S E Davies, J A Walker-Smith

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Background: We investigated a consecutive series of children with chronic enterocolitis and regressive developmental disorder.

Methods: 12 children (mean age 6 years [range 3–10], 11 boys) were referred to a paediatric gastroenterology……

Findings: Onset of behavioural symptoms was associated, by the parents, with measles, mumps, and rubella vaccination in eight of the 12 children, …….

Interpretation: We identified associated gastrointestinal disease and developmental regression in a group of previously normal children, which was generally associated in time with possible environmental triggers…..

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The New England
Journal of Medicine

VOLUME 347 NOVEMBER 7, 2002 NUMBER 19

A POPULATION-BASED STUDY OF MEASLES, MUMPS, AND RUBELLA VACCINATION AND AUTISM

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Summary

Background We investigated a consecutive series of children with chronic enterocolitis and regressive developmental disorder.

Methods 12 children (mean age 6 years [range 3–10], 11 boys) were referred to a paediatric gastroenterology unit with a history of normal development followed by loss of acquired skills, including language, together with diarrhoea and abdominal pain. Children underwent gastroenterological, neurological, and developmental assessment and review of developmental records. Ileocolonoscopy and biopsy sampling, magnetic-resonance imaging (MRI), electroencephalography (EEG), and lumbar puncture were done under sedation. Barium follow-through radiography was done where possible. Biochemical, haematological, and immunological profiles were examined.

Findings Onset of behavioural symptoms was associated by the parents, with measles, mumps, and rubella vaccination in eight of the 12 children, with measles infection in one child, and otitis media in another. All 12 children had intestinal abnormalities ranging from lymphoid nodular hyperplasia to aphthoid ulceration. Histology showed patchy chronic inflammation in 11 children and reactive ileal lymphoid hyperplasia in seven, but no granulomas. Behavioural disorders included autism (nine), disintegrative psychosis (one), and possible postviral or vaccinal encephalitis (one). There were no focal neurological abnormalities and MRI and EEG tests were normal. Abnormal laboratory results were significantly raised urinary methylmalonic acid compared with age-matched controls ($p=0·003$), low haemoglobin in four children, and low serum IgA in four children.

Interpretation We identified associated gastrointestinal disease and developmental regression in a group of previously normal children, which was generally associated in time with possible environmental triggers.

Lancet 1998; **351**: 637–41
See Commentary page

Inflammatory Bowel Disease Study Group, University Departments of Medicine and Histopathology (A J Wakefield FRCS, A Anthony MB, J Linnell PhD, A P Dhillon MRCPath, S E Davies MRCPath) **and the University Departments of Paediatric Gastroenterology** (S H Murch MB, D M Casson MRCP, M Malik MRCP, M A Thomson FRCP, J A Walker-Smith FRCP,), **Child and Adolescent Psychiatry** (M Berelowitz FRCPsych), **Neurology** (P Harvey FRCP), **and Radiology** (A Valentine FRCR), **Royal Free Hospital and School of Medicine, London NW3 2QG, UK**

Correspondence to: Dr A J Wakefield

Introduction

We saw several children who, after a period of apparent normality, lost acquired skills, including communication. They all had gastrointestinal symptoms, including abdominal pain, diarrhoea, and bloating and, in some cases, food intolerance. We describe the clinical findings, and gastrointestinal features of these children.

Patients and methods

12 children, consecutively referred to the department of paediatric gastroenterology with a history of a pervasive developmental disorder with loss of acquired skills and intestinal symptoms (diarrhoea, abdominal pain, bloating and food intolerance), were investigated. All children were admitted to the ward for a week, accompanied by their parents.

Clinical investigations

We took histories including details of immunisations and exposure to infectious diseases, and assessed the children. In 11 cases the history was obtained by the senior clinician (JW-S). Neurological and psychiatric assessments were done by consultant staff (PH, MB) with HMS-4 criteria.[1] Developmental assessment included a review of prospective developmental records from parents, health visitors, and general practitioners. Four children did not undergo psychiatric assessment in hospital; all had been assessed professionally elsewhere, so these assessments were used as the basis for their behavioural diagnosis.

After bowel preparation, ileocolonoscopy was performed by SHM or MAT under sedation with midazolam and pethidine. Paired frozen and formalin-fixed mucosal biopsy samples were taken from the terminal ileum; ascending, transverse, descending, and sigmoid colons, and from the rectum. The procedure was recorded by video or still images, and were compared with images of the previous seven consecutive paediatric colonoscopies (four normal colonoscopies and three on children with ulcerative colitis), in which the physician reported normal appearances in the terminal ileum. Barium follow-through radiography was possible in some cases.

Also under sedation, cerebral magnetic-resonance imaging (MRI), electroencephalography (EEG) including visual, brain stem auditory, and sensory evoked potentials (where compliance made these possible), and lumbar puncture were done.

Laboratory investigations

Thyroid function, serum long-chain fatty acids, and cerebrospinal-fluid lactate were measured to exclude known causes of childhood neurodegenerative disease. Urinary methylmalonic acid was measured in random urine samples from eight of the 12 children and 14 age-matched and sex-matched normal controls, by a modification of a technique described previously.[2] Chromatograms were scanned digitally on computer, to analyse the methylmalonic-acid zones from cases and controls. Urinary methylmalonic-acid concentrations in patients and controls were compared by a two-sample t test. Urinary creatinine was estimated by routine spectrophotometric assay.

Children were screened for antiendomyseal antibodies and boys were screened for fragile-X if this had not been done

Mislingar

- ✓ The number of measles cases in Europe 2017:

  24.000 cases / 30.000 suspected
- ✓ The number of measles cases in Europe, 2018 and 2019: around 100.000 and increasing!
- ✓ Yfir 100.000 born látast árlega í heiminum úr mislingum

- ✓ Measles induced immunosuppression!

Fifth disease

Fifth disease

(erythema infectiosum)

- Parvovirus B 19
- Meðg. um 2 vikur, viremia í nokkra daga áður en útbrot koma fram
- Lítil prodromal eink, oft væg efri öndunarfæraeink,, liðeinkenni.
- Roði í kinnum með circumoral fölva (slapped-face appearance)
- Erythematous, maculopapular (morbilliform) útbrot centrifugalt
- Síðar möskvakennd útbrot (reticulert). Oft symmetriskt.
- Hætta að smita þegar útbrot birtast
- Fósturskaði/fósturlát mögulegt, non-immune hydrops, cong aplastic anaemia.
- Rx: styðjandi

Fifth disease

Fifth disease
(Erythema infectiosum)

Fifth disease
(Erythema infectiosum)

Roseola

(Mislingabróðir, 6th disease)

Roseola

(exanthema subitum, mislingabróðir, dílaroði, 6th disease)

- HHV 6 (75%), HHV 7 (15%), aðrar veirur (10%)
  (f og fr munnvatnsveirur fullorðinna)
- Meðganga 5-15 dagar (9d)

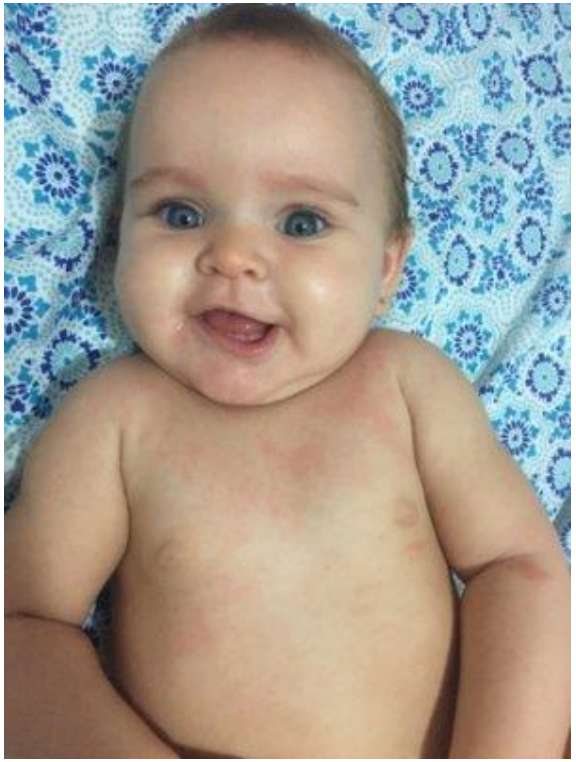
- Eink: stöðugur hár hiti í 3-5 daga, ± öndunarf.eink, ± fylling í fontanellu, lítil vanlíðan.
- Útbrotin koma þegar/eftir að hitinn fellur, rósrauð, lítil, centrifugal (á bol) í upphafi, seinna á útlimum. Hverfa oft fljótt, horfinn á <4d

- Hitakrampar (10-20%), etv helmingur fyrsta hitakrampa
- Aseptiskur meiningitis í 30-40%

- Rx: styðjandi

Roseola

(Mislingabróðir, 6th disease)



Hand- foot- and mouth disease

Hand- foot- and mouth disease

- Coxackie A16 (og 71)
- Meðg 4-6d, sumar og haust
- Húðútbr (um 100% í yngstu börnunum, lægra með hærri aldri), útbrot í munni, hendur oftar en fætur, vesiculur

- Gengur yfir á fáum dögum

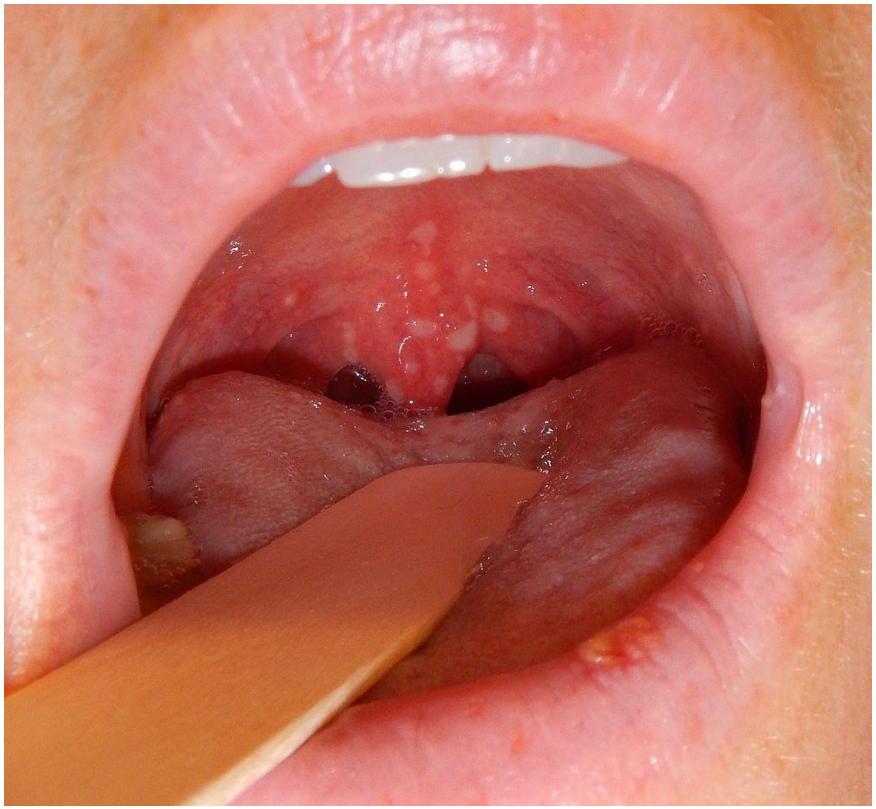
- Rx: engin/stoðmeðferð

- Ath: EKKI gin og klaufaveiki !!!

Hand- foot- and mouth disease

Hand- foot- and mouth disease

Herpangina



Herpangina: cox A 16
(Echovirusar)

Fyrst og fremst börn

Blöðrur í munni/koki/tons/o.s.frv.

Blöðrur → sár

Stundum hiti/höfuðverkur o.þ.h
á undan blöðrunum

Kíghósti

(Kikhósti, pertussis, whooping cough, 100 daga hósti)

- Bordatella pertussis
- Meðg. 7-10 dagar, smitandi í um 3 v
- Kvefstig (catarrhal): 2 v, vaxandi kvef og nefrennsli
- Hóstastig (spasmodic): 2-4 v, hóstaköst í hviðum (kik), enda oft í max útöndun og etv cyanosu. Þegar barnið nær andanum; mikil soghljóð (kíg). Slímuppköst. Oft hitalaus
- Afturbatastig (convalescent): 2 (-8) v, skánandi hósti.
- Fylgikv: lungnabólgur, aðrar efri loftvegasýkingar, krampar, encephalopathia o.fl
- Rx: macrolidar

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- Rx: macrolidar

Faraldsfræði kikhósta

- Afar smitandi – dropasmit
  (90% smithætta fyrir óbólusetta einstaklinga á heimilinu)
- Smita í u.þ.b. >3 vikur
- Unglingar og fullorðnir algengir smitberar
  (um 40% mæður, 15% feður)

Bordatella pertussis

Filamentous haemagglutinin (FHA)
Pertactin (PRN)
Fimbriae (FIM) type 2 and type 3

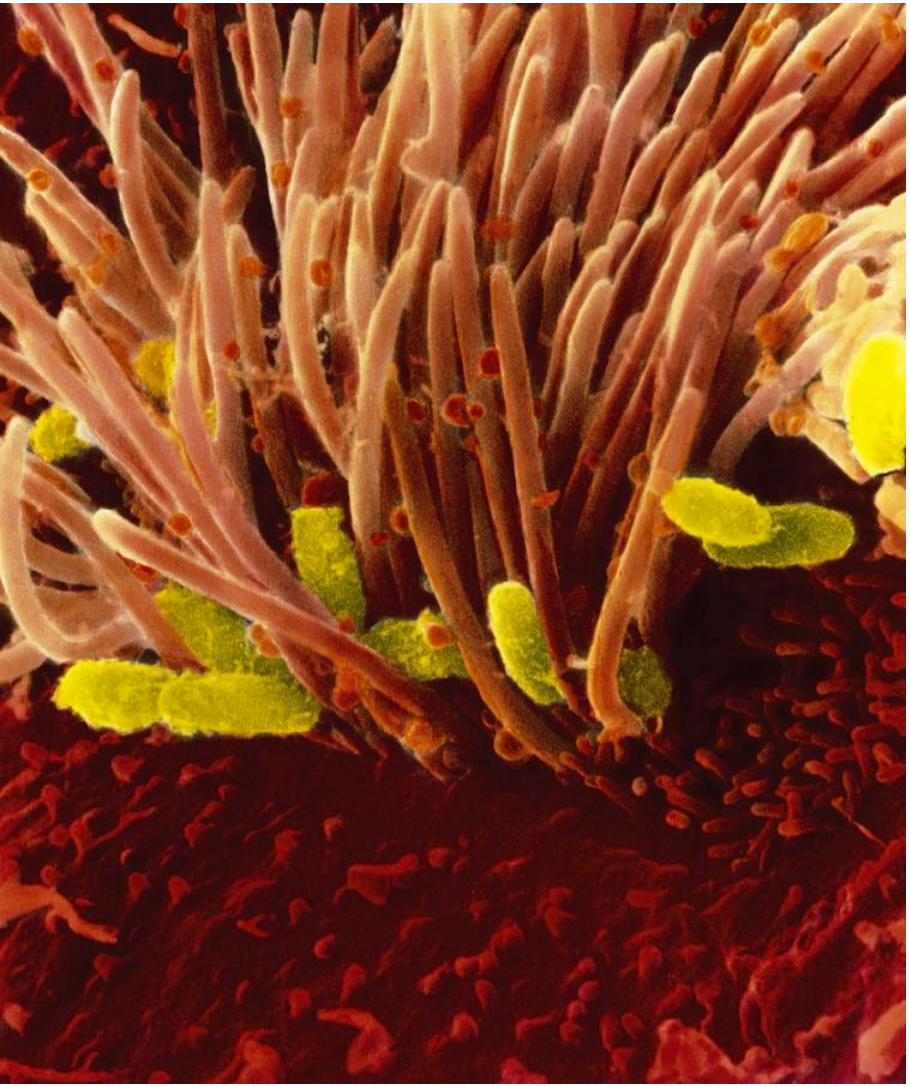
Tengist yfirborðsfrumum

Pertussis toxin (PT)
Adenylate cyclase toxin (ACT)
Tracheal cytotoxin (TCT)

Skaðar frumur og bifhár

Lipo-oligosaccharide (LPS).

Verst ónæmisviðbrögðu



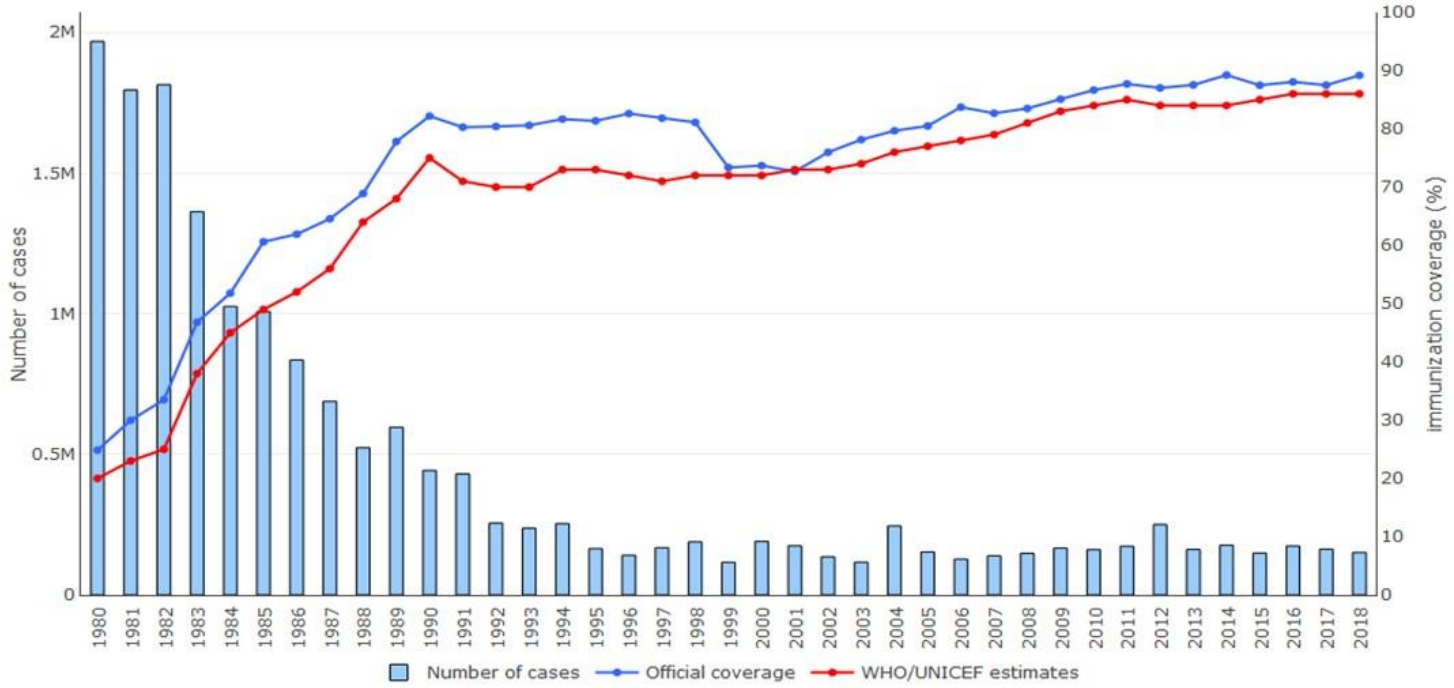
Bordatella pertussis

Tengist yfirborðsfrumum í öndunarvegi

Skaðar þekjufrumur
Sérstkalega bifháraþekju

Bifhárafrumur endurnýjast
– á mörgum vikum!

Pertussis Global annual reported cases and DTP3 coverage 1980-2018

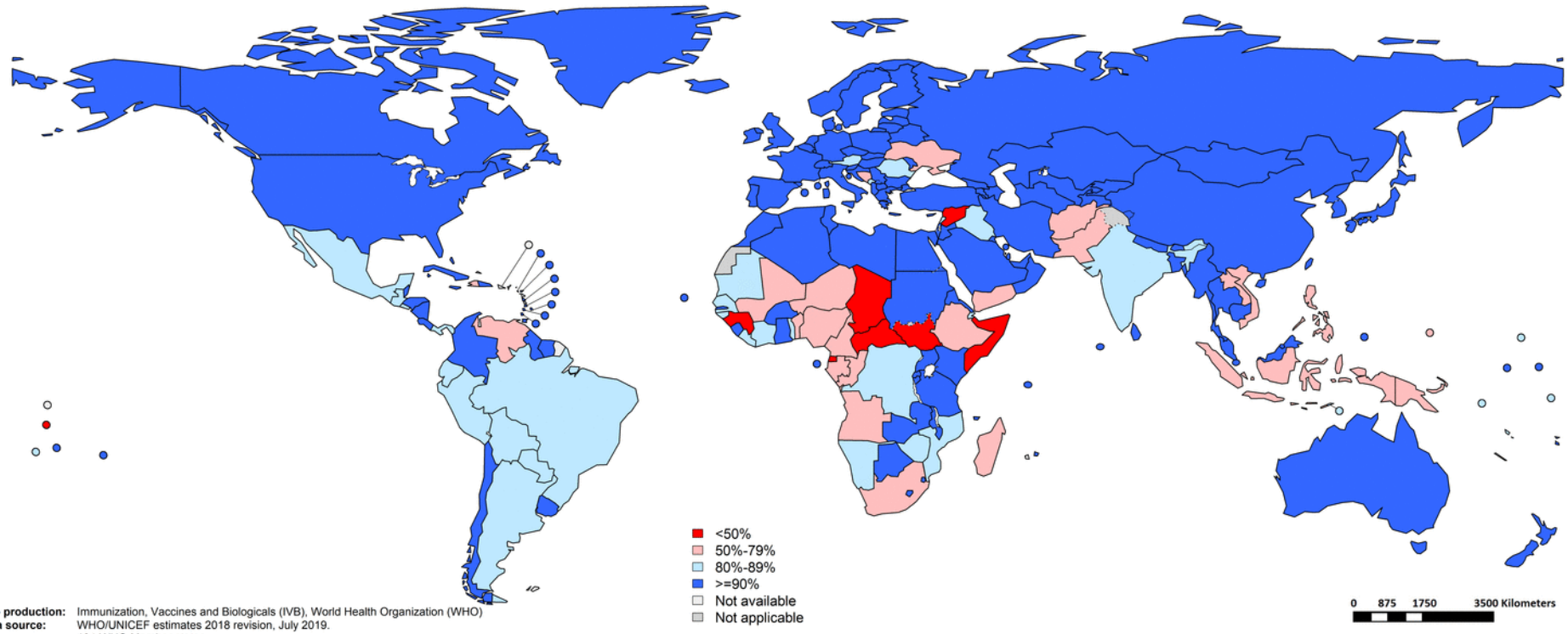


Source: WHO/UNICEF coverage estimates 2018 revision, July 2019 and Cases of vaccine preventable diseases and Official Estimates reported by Member States through the WHO/UNICEF Joint Reporting Form as at 01 July 2019.
Immunization Vaccines and Biologicals, (IVB), World Health Organization.
194 WHO Member States. Date of slide: 08 July 2019

World Health Organization

Immunization coverage with 3rd dose of diphteria and tetanus toxoid and pertussis containing vaccines

2018



Map production: Immunization, Vaccines and Biologicals (IVB), World Health Organization (WHO)
Data source: WHO/UNICEF estimates 2018 revision, July 2019.
194 WHO Member states.

Disclaimer:

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area nor of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

Bólusetningar

Embætti landlæknis
Sóttvarnalæknir

Almennar bólusetningar barna á Íslandi frá júlí 2023

Aldur:	Bólusetning gegn:
3 mánaða	Kíghósta, barnaveiki, stífkrampa, Haemofilus influenzae sjúkdómi af gerð b (Hib) og mænusótt í einni sprautu (Pentavac). Pneumókokkum í annarri sprautu (Vaxneuvance).
5 mánaða	Kíghósta, barnaveiki, stífkrampa, Haemofilus influenzae sjúkdómi af gerð b (Hib) og mænusótt í einni sprautu (Pentavac). Pneumókokkum í annarri sprautu (Vaxneuvance).
12 mánaða	Kíghósta, barnaveiki, stífkrampa, Haemofilus influenzae sjúkdómi af gerð b (Hib) og mænusótt í einni sprautu (Pentavac). Pneumókokkum í annarri sprautu (Vaxneuvance). Meningókokkum í þriðju sprautu (MenQuadfi).
18 mánaða	Mislingum, hettusótt og rauðum hundum í einni sprautu (M-M-RVAXPRO). Hlaupabólu í annarri sprautu (Varilrix).
2,5 ars	Hlaupabólu (Varilrix)
4 ára	Barnaveiki, stífkrampa og kíghósta í einni sprautu (Boostrix).
12 ára	Mislingum, hettusótt og rauðum hundum í einni sprautu (M-M-RVAXPRO). HPV, tvær sprautur gefnar með a.m.k. 6 mánaða millibili (Gardasil 9).
14 ára	Barnaveiki, stífkrampa og kíghósta ásamt mænusótt í einni sprautu (Boostrix Polio).

Frekari upplýsingar um bólusetningar barna má finna á vef embættis landlæknis (www.landlaeknir.is) og á heilsugæslustöðvum.

Fyrirkomulag barnabólusetninga á Íslandi frá júlí 2023

https://www.landlaeknir.is/smit-og-sottvarnir/bolusetningar/bolusetningar-barna/

Bólusetningar

Aldur:	Bólusetning gegn:
3 mánaða	
5 mánaða	
6 mánaða	
12 mánaða	
18 mánaða	
2,5 ára	
4 ára	
12 ára	
14ára	

Fyrirkomulag barnabólusetninga á Íslandi eftir 1. mars 2020
https://www.landlaeknir.is/smit-og-sottvarnir/bolusetningar/bolusetningar-barna/

..... að lokum !

- Ónæmisaðgerðir (ónæmisfræði) hafa bjargað fleiri mannslífum en nokkur önnur heilbrigðisaðgerð
- Enn er mikið starf óunnið
  - Lönd og álfur
  - Ýmsir sjúkdómar
    - Rotaveira
    - RSV
    - HPV – drengir og stúlkur
    - HIV ???
    - Hepatitis A, B, C
    - Meningococcar A, B, C
    - Pneumococcar – fjölmargar hjúpgerðir
    - Streptococcar gr A og B (GAS og GBS)
    - O.s.frv., o.s.frv.

Lok !!!