ener çağrı dinleyici

MENİNGOKOK ENFEKSİYONLARI
Epidemiyoloji, Klinik Bulgular
MenACWY-CRM

Prof.Dr. Ener Çağrı Dinleyici

14 Ekim 2017

MENİNGOKOK TÜRKİYE

Siirt'te Meningokok Menenjik hastalığı teşhisi konulan Zeynep bebek, hayatını kaybetti. Hastalığın bulaşıcı olması sebebiyle hastanenin çocuk bölümü boşaltıldı, Zeynep'in ailesi de karantina altına alındı.

Baykan ilçesinden Siirt'e, yüksek ateş sebebiyle sevk edilen 10 aylık Zeynep Sarsılmaz'a, yapılan ilk müdahalede, ön tanıda Meningokok Menenjit hastalığı teşhisi konuldu. Bunun üzerine Siirt Devlet Hastanesi Acil Servisi'nde, tedbir amaçlı oyarak karantina uygulamasına geçildi. Çocuk bölümü boşaltıldı, hastane çalışanları maske ve eldiven taktı. Hastanede yapılan tüm müdahalelere rağmen Zeynep Sarsılmaz, kurtarılamayarak hayatını kaybetti. Zeynep'in annesi Hülya ve babası Süleyman ile kardeşleri de karantina altına alındı.

(CİHAN)

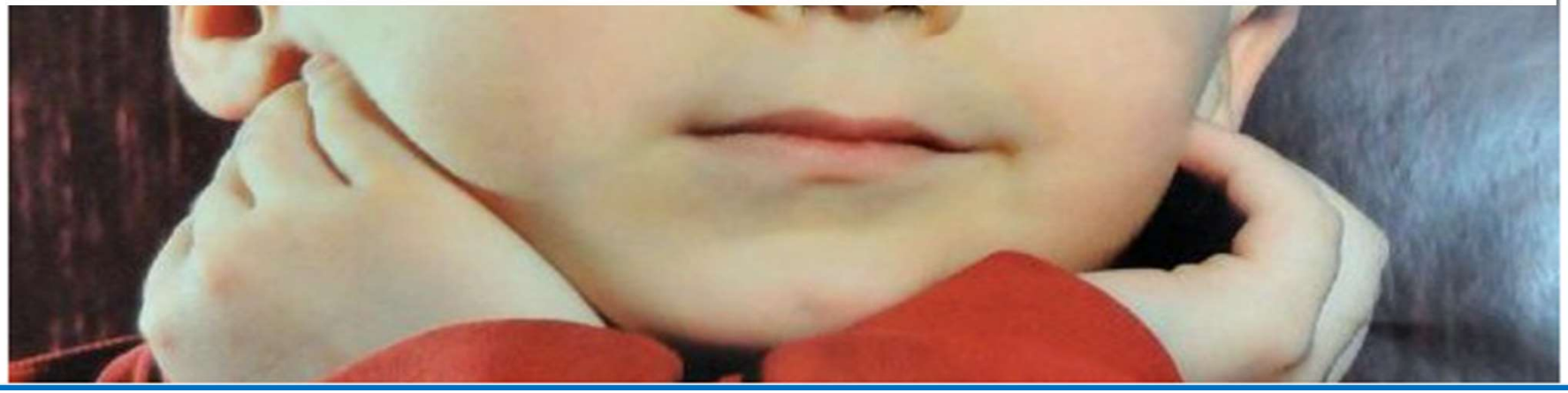
MENİNGOKOK TÜRKİYE

ener çağrı dinleyici

Hürriyet > Yerel Haberler > Yalova > "Başka çocuklar ölmesin Meningokok aşı takvimine alınsın"

"Başka çocuklar ölmesin Meningokok aşı takvimine alınsın"

Yalova'da yaşayan Tunç ailesinin çocuklarından Miraç Zeki, geçtiğimiz 22 Nisan günü rahatsızlanınca Yalova Devlet Hastanesi'ne götürüldü. Burada muayene edilen ilkokul öğrencisi Miraç Zeki taburcu edilip evine gönderildi. Akşam saatlerinde çocuğun daha da kötüleşmesi nedeniyle ailesi, Yusuf Ziya İlkokulu 2. Sınıf öğrencisi olan Miraç Zeki'yi Bursa Dörtçelik Çocuk Hastanesi'ne götürdü. Burada 'meningokok' tanısı konulan çocuk tedavi altına alındı. Miraç Zeki Tunç çocuk bayramının kutlandığı 23 Nisan günü yaşamını yitirdi.



MENENJİT-TARİHÇE

- Hipokrat: Ateş ve baş ağrısı ile seyreden ve genellikle fatal bir klinik tablo
- 1684-Willis: İngiliz araştırmacı, döküntü ile seyreden bir salgın
- 1806, Viesseux: İsviçre' de Cenevre yakınlarında meningokok salgını, olguların büyük bölümü menenjit
- Heinrich Irenäus Quincke, ilk LP
- 1806, ABD' de meningokok salgını

Clinical Features Suggestive of Meningitis in Children: A Systematic Review of Prospective Data

Sarah Curtis, Kent Stobart, Ben Vandermeer, David L. Simel and Terry Klassen

Pediatrics 2010;126;952-960; originally published online Oct 25, 2010;
DOI: 10.1542/peds.2010-0277

- 14145 referans
- Fontanel kabarıklığı LR 8.00 [95%CI 2.4 –26]
- Ense sertliği (7.70 [3.2– 19])
- FK yaşı dışında konvülziyon (4.40 [3.0 – 6.4]
- Beslenmenin azalması 2.00 [1.2–3.4]

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Clinical Features Suggestive of Meningitis in Children: A Systematic Review of Prospective Data

Sarah Curtis, Kent Stobart, Ben Vandermeer, David L. Simel and Terry Klassen

Pediatrics 2010;126;952-960; originally published online Oct 25, 2010;
DOI: 10.1542/peds.2010-0277

- **Sarılık 5.90 [95% CI: 1.8 –19])**
- **Toksik görünüm 5.80 [3.0 –11]**
- **Meningeal bulgular 4.50 [2.4 – 8.3]**
- **Ense sertliği (4.00 [2.6 – 6.3])**
- **Kernig (3.50 [2.1–5.7]), tonus artışı (3.20[2.2– 4.5]**
- **40°C ateş (2.90 [1.6 –5.5]),**
- **Brudzinski sign (2.50 [1.8 –3.6])**
- **Meningeal irritasyon bulgularının olmaması (LR: 0.41 [95% CI: 0.30 – 0.57])**
- **Anormal (tiz) ağlama olmaması (0.30 [0.16 – 0.57])**
- **Ateşin olmaması etkili değil (LR: 0.70 [95% CI: 0.53– 0.92]).**

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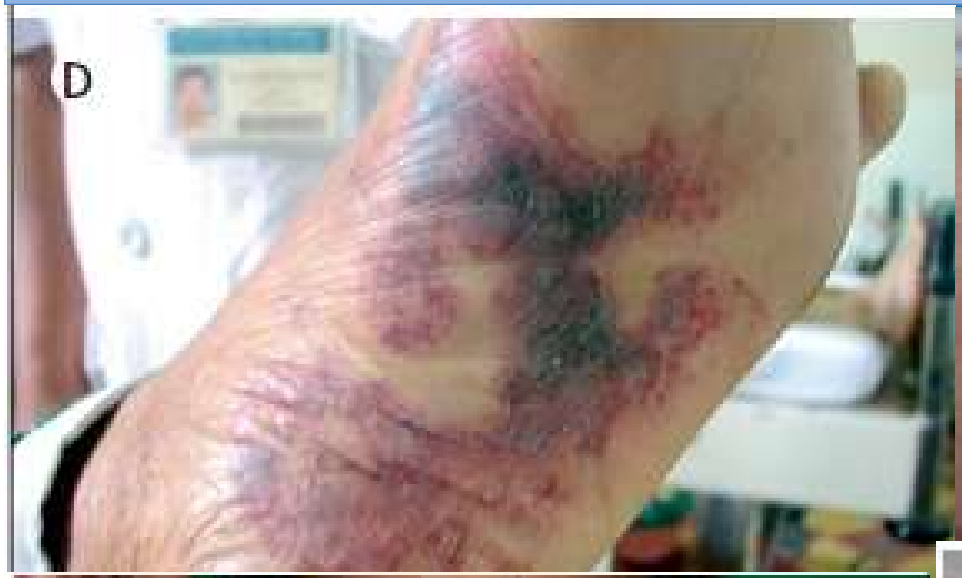
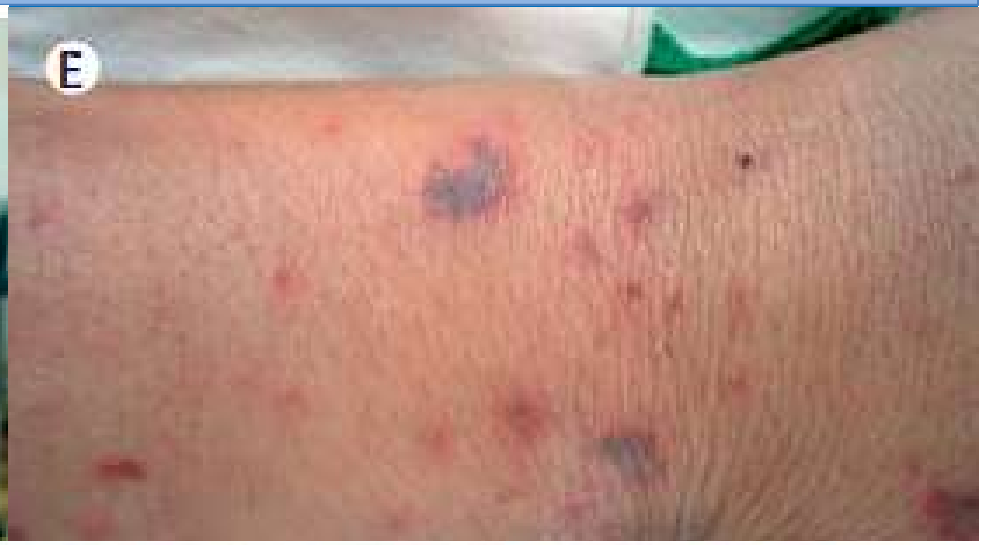
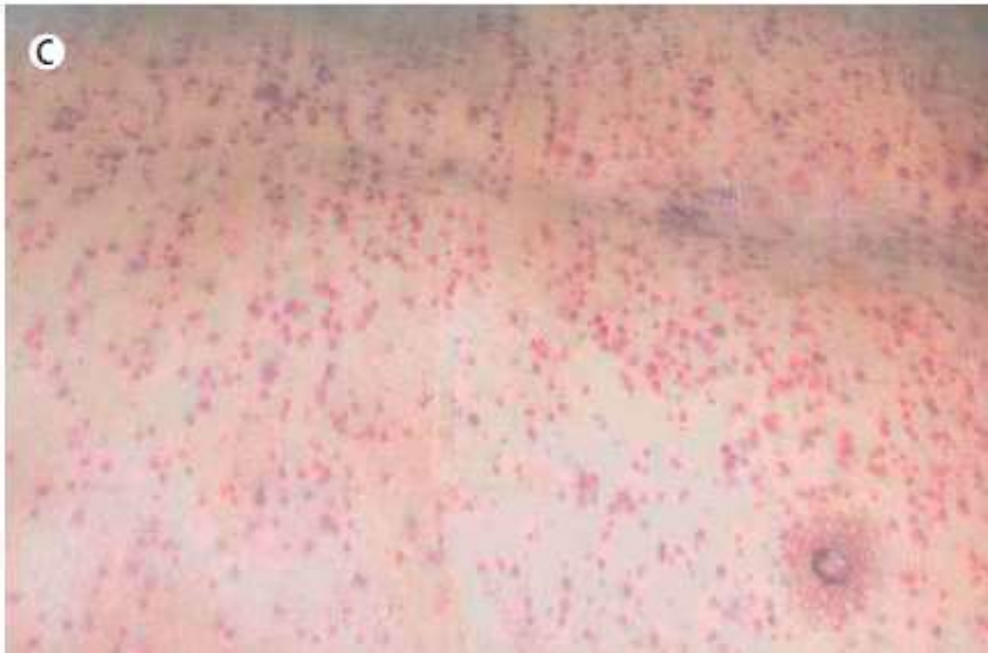
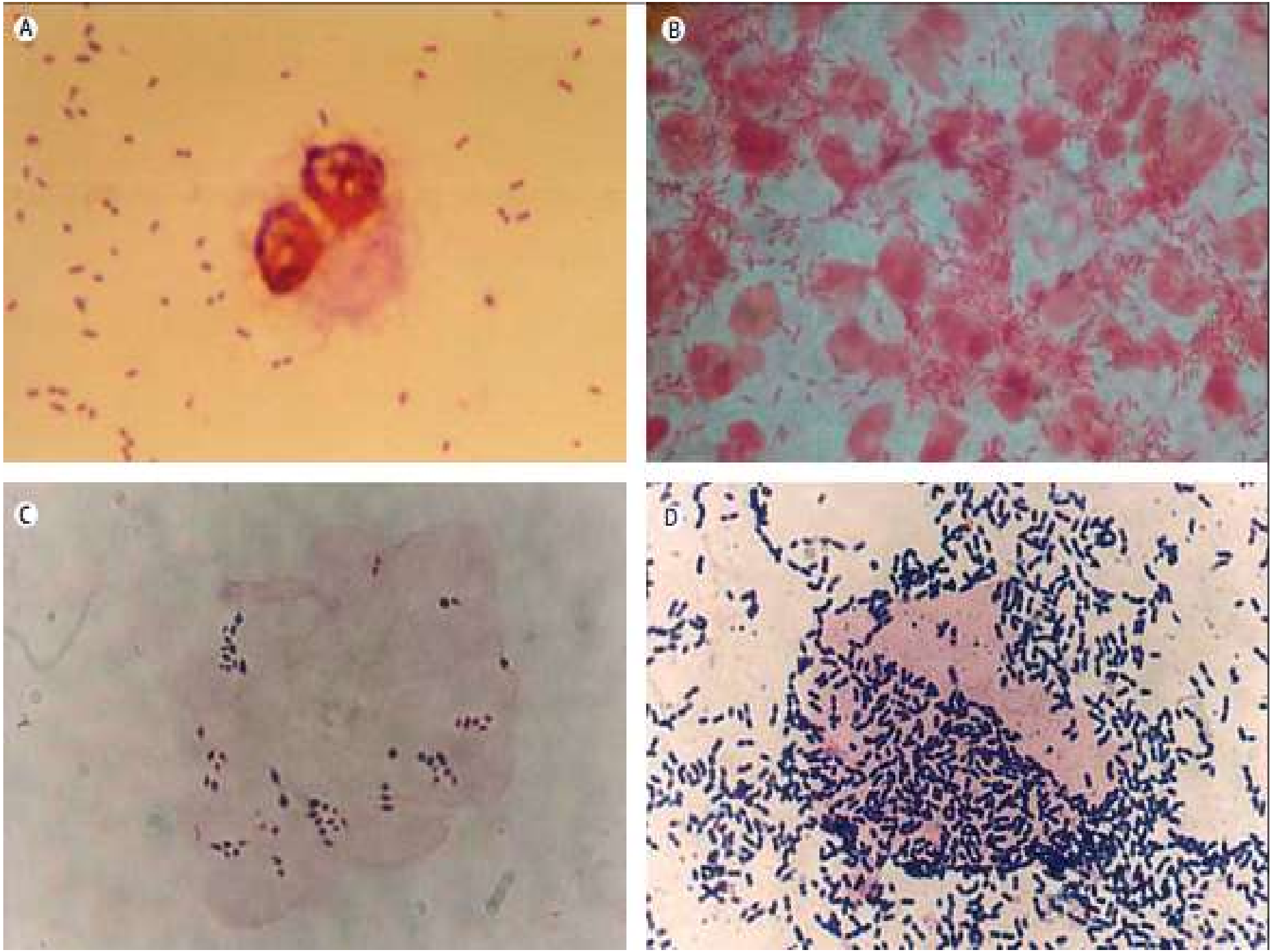
MENENJİT BULGULAR








A
B
C
D

	Likely pathogens
<1 month	Group B streptococci, *Escherichia coli*, *Listeria monocytogenes* (neonatal pathogens)
1–3 months	
No immunisation or one dose of primary immunisation	Neonatal pathogens, *S pneumoniae*, *N meningitidis*, Hib
3–6 months	
No immunisation	*S pneumoniae*, *N meningitidis*, Hib
At least two doses of primary immunisation (with Hib-Omp vaccine)	*S pneumoniae*, *N meningitidis*
>7 months to 5 years	
No immunisation	*S pneumoniae*, *N meningitidis*, Hib
Primary immunisation completed	*S pneumoniae* (non-PCV serotypes), *N meningitidis*
6–21 years	*S pneumoniae*, *N meningitidis*

Risk factors for specific pathogens are as follows: cerebrospinal fluid leak, cochlear implant, nephrotic syndrome (*Streptococcus pneumoniae*); terminal complement deficiencies, freshmen living in dormitories, outbreaks (*Neisseria meningitidis*); asplenia, sickle-cell disease, HIV infection, otitis, sinusitis (*S pneumoniae*, *Haemophilus influenzae* type b [Hib]); immunodeficiency, diabetes mellitus (*S pneumoniae*, *Listeria monocytogenes*). PCV=pneumococcal conjugate vaccine.

Table 4: Likely pathogens for meningitis based on age and immunisation status

BAKTERİYEL MENENJİTTE SONA MI YAKLAŞIYORUZ?

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B BIOLOGICAL SCIENCES

The impact of protein-conjugate polysaccharide vaccines: an endgame for meningitis?

Martin C. J. Maiden

Phil. Trans. R. Soc. B 2013 **368**, 20120147, published 24 June 2013


6'6"
6'0"
5'6"
5'0"
4'6"
4'0"
3
3
five criminals . one line up . no coincidence
H. influenzae
N.meningitidis
S.pneumonia
Tüberküloz
Yenidoğan: GBS, E.coli, L. monocytogenes
The Usual Suspects

THE LANCET

< Previous Article

Volume 383, No. 9922, p1040, 22 March 2014

Next Article >

Correspondence

"WhatsAppitis"

Inés M Fernandez-Guerrero

Published: 22 March 2014

DOI: http://dx.doi.org/10.1016/S0140-6736(14)60519-5

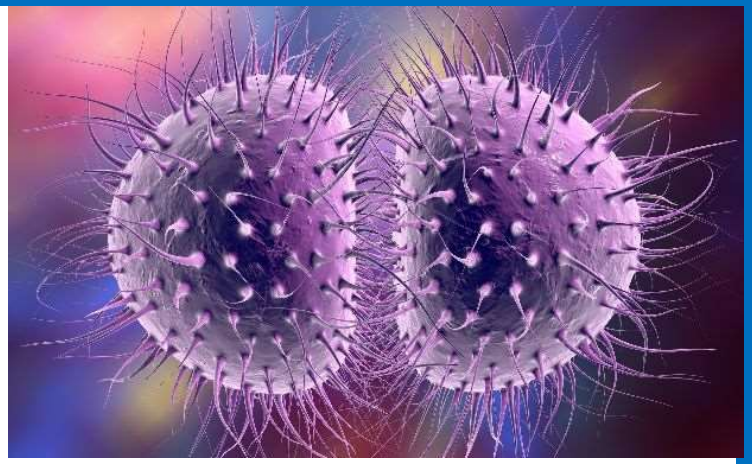
Kaynak: Dr. Ersin Akpınar, Dr. Hakan Tekayak

EXPERT REVIEWS

Neisseria meningitidis infection: who, when and where?

Expert Rev. Anti Infect. Ther. Early online, 1–15 (2015)

İNVAZİV MENİNGOKOK ENFEKSİYONLARI



- Neisseria meningitidis
- Gram negatif diplokok bakteri
- Polisakarit kapsülüne göre en az 12 serotip
- En sık invaziv hastalık oluşturan serotipler A, B, C, Y, W, X
- Serogrupların dağılımı coğrafi bölgelere ve yaş gruplarına göre değişiklik göstermektedir

MENİNGOKOK ENFEKSİYONLARI DÜNYADA HALK SAĞLIĞI PROBLEMİ?

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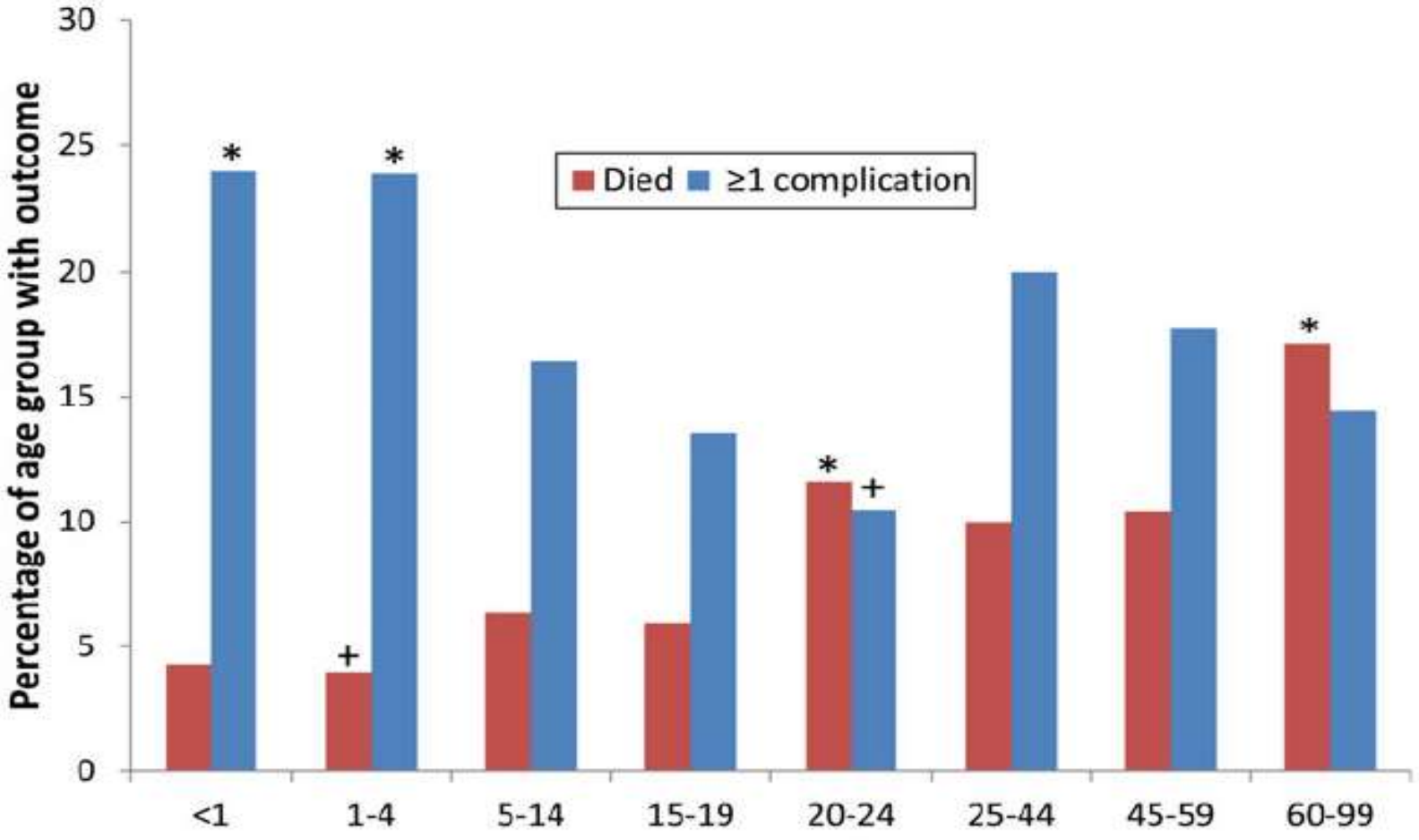
İNVAZİV MENİNGOKOK ENFEKSİYONLARI



CID 2015:60 (15 April) • e27

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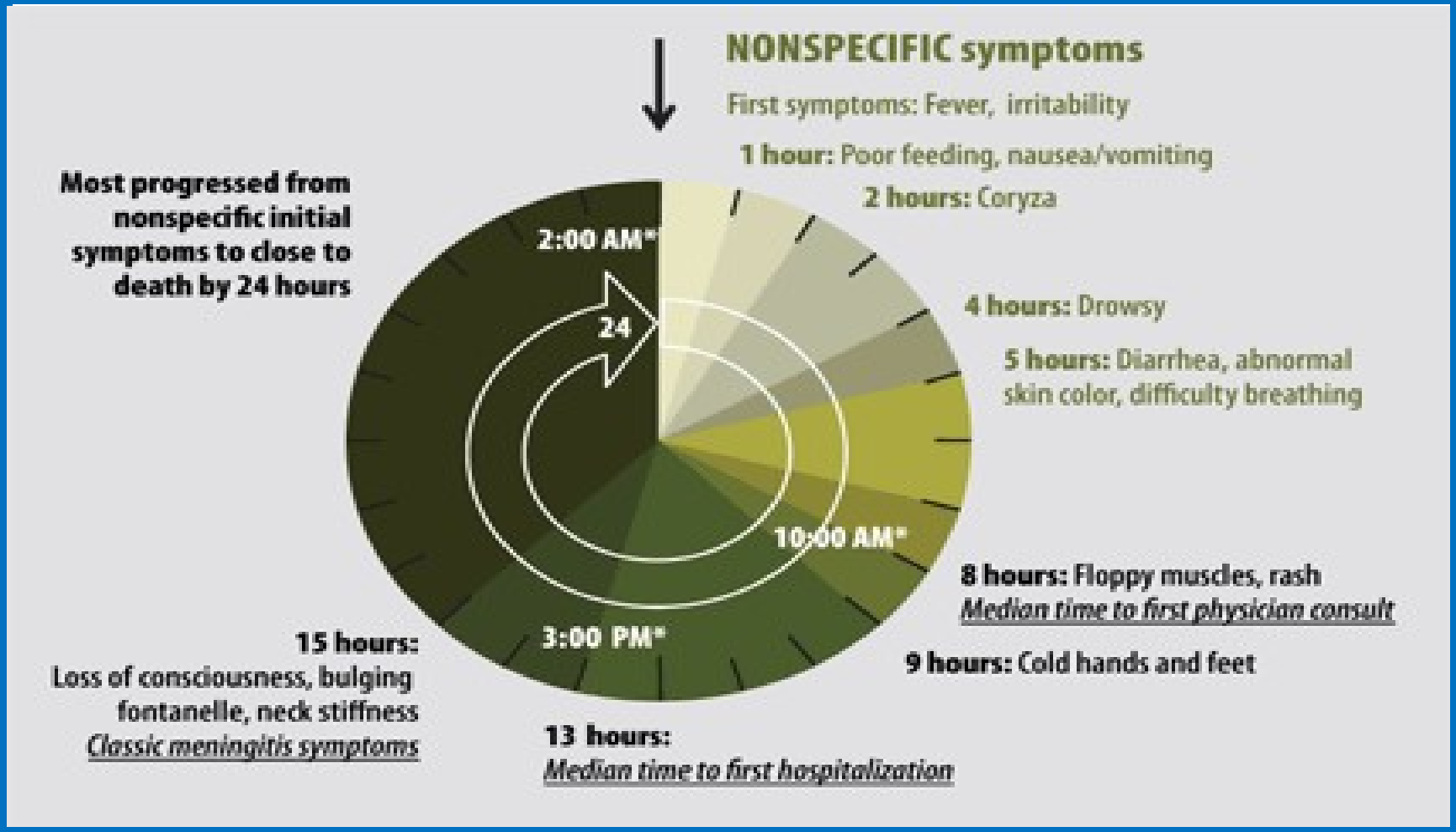
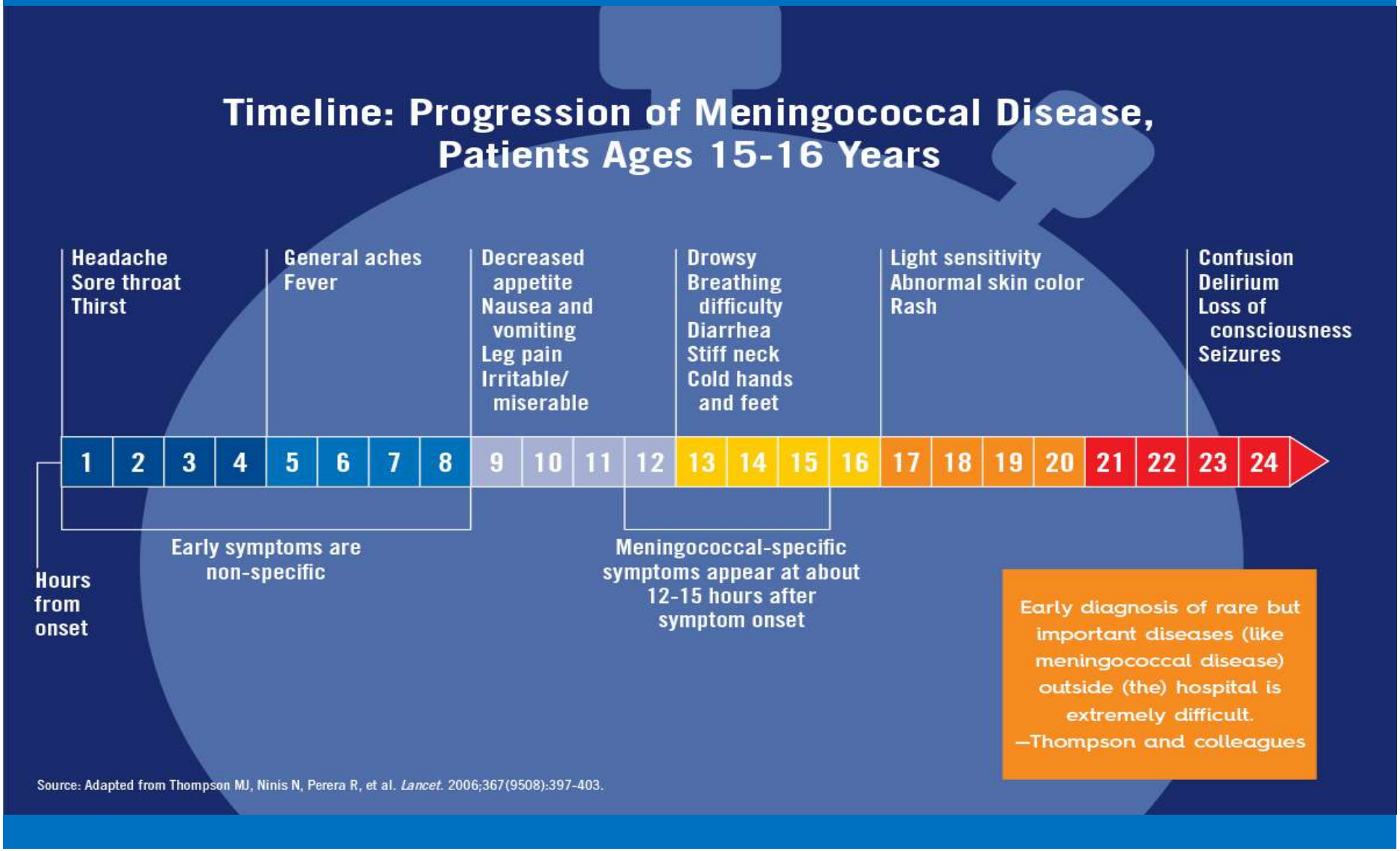


KLİNİK BULGULAR
ERGEN



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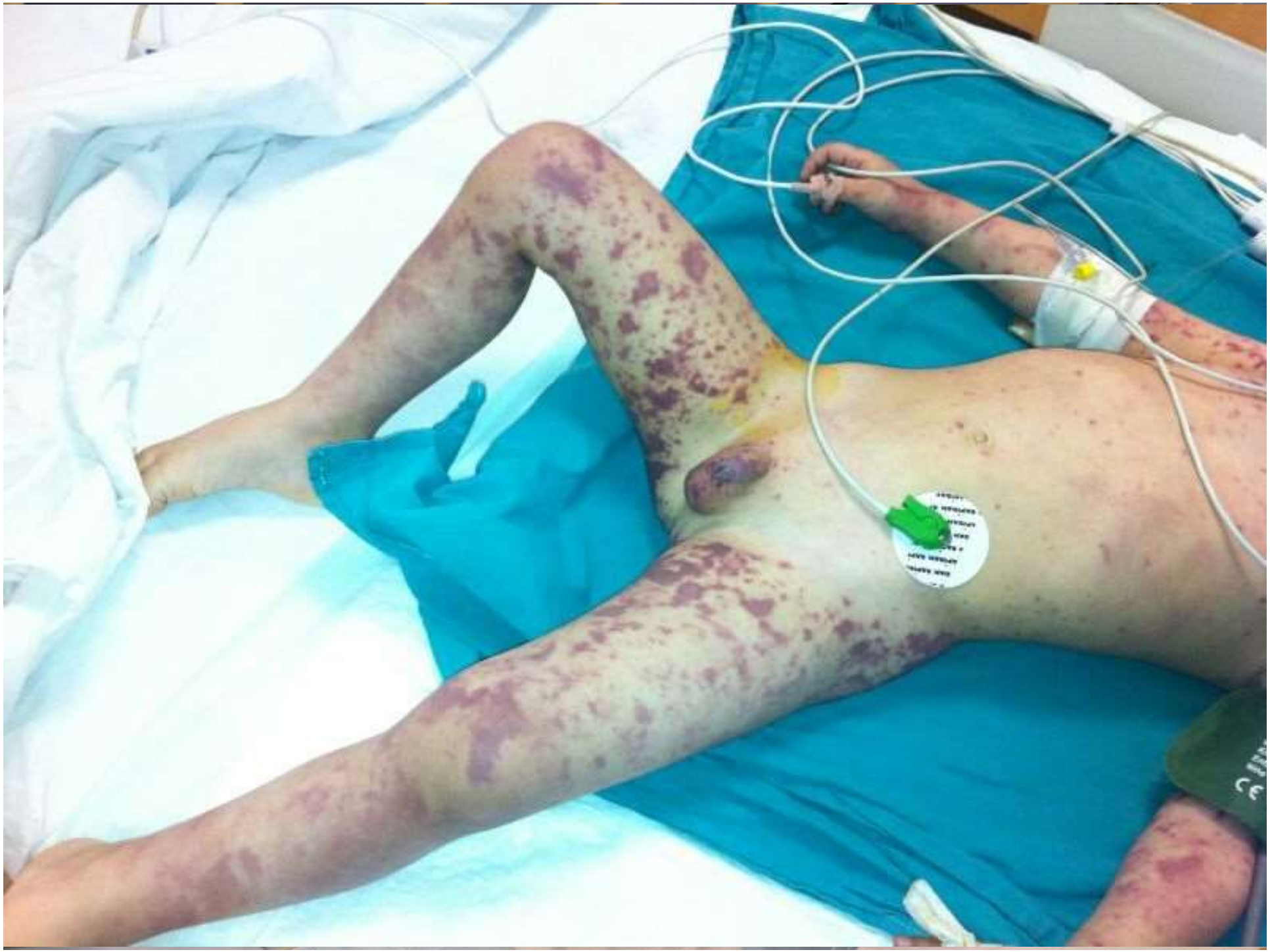

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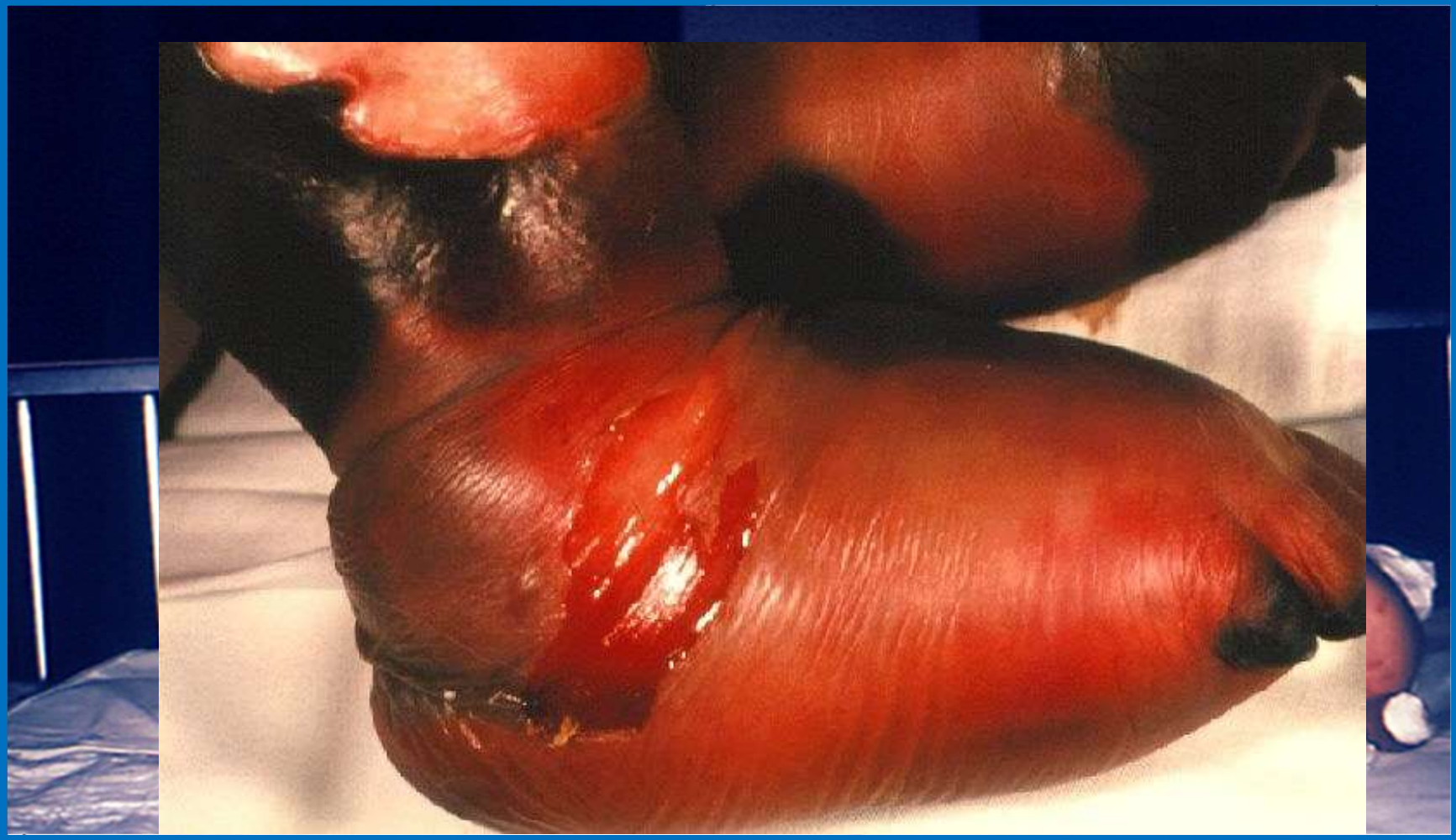

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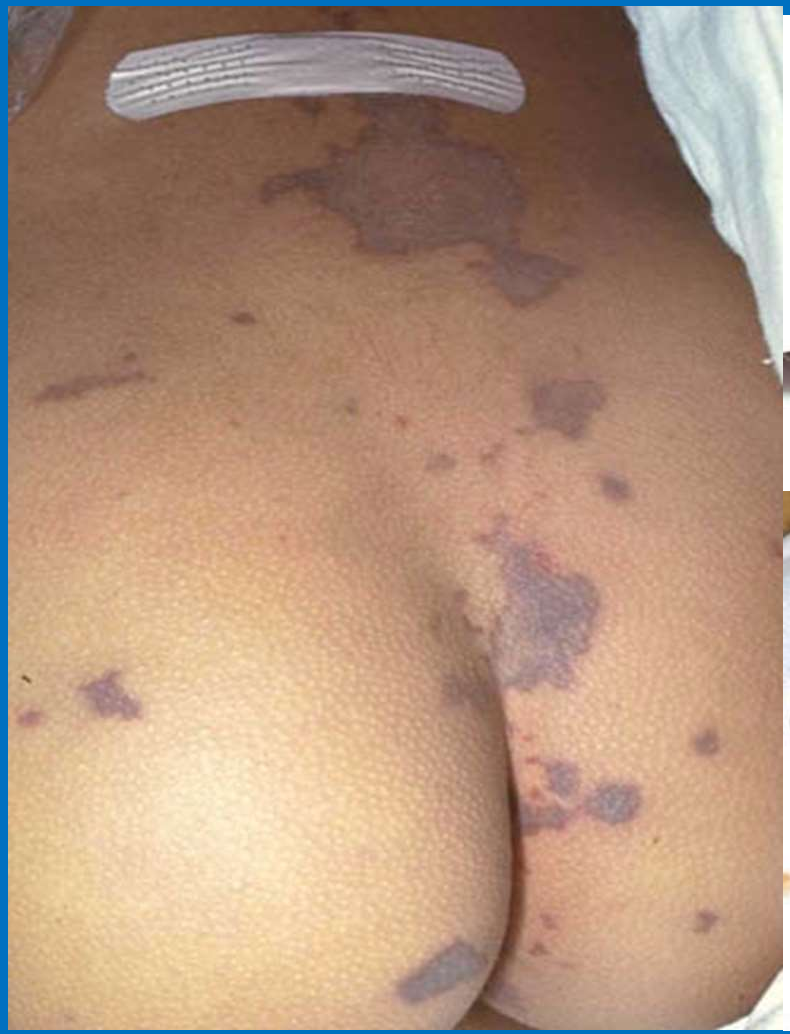
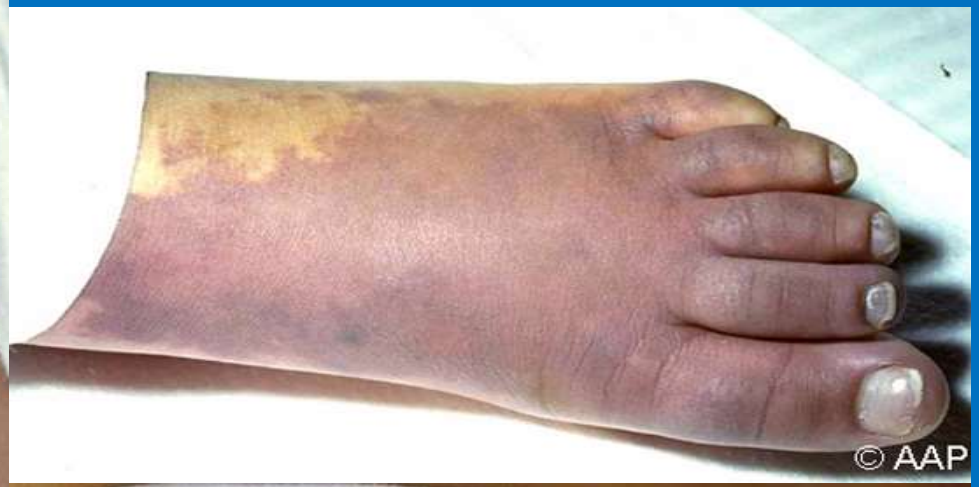
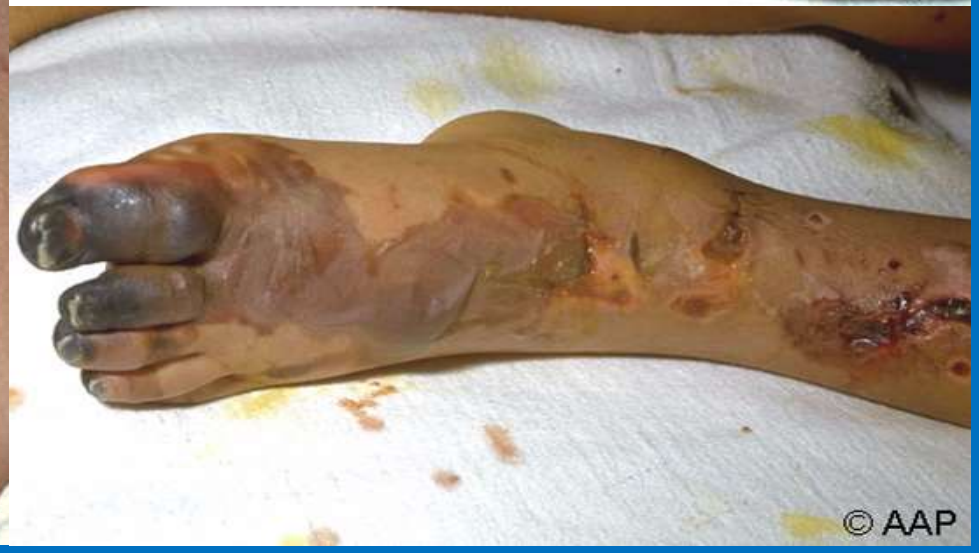






MENİNGOKOK ENFEKSİYONLARI-2017
Gastrointestinal Sistem Bulguları W/cc11

ener çağrı dinleyici

RAPID COMMUNICATIONS

Presentation with gastrointestinal symptoms and high case fatality associated with group W meningococcal disease (MenW) in teenagers, England, July 2015 to January 2016

H Campbell [1], SR Parikh [1], R Borrow [2], E Kaczmarski [2], ME Ramsay [1], SN Ladhani [1,3]
1. Immunisation Department, Public Health England, London United Kingdom
2. Meningococcal Reference Unit, Public Health England, Manchester United Kingdom
3. St. George's University of London, United Kingdom

Correspondence: Sydel R. Parikh (sydel.parikh@phe.gov.uk)

Citation style for this article:
Campbell H, Parikh SR, Borrow R, Kaczmarski E, Ramsay ME, Ladhani SN. Presentation with gastrointestinal symptoms and high case fatality associated with group W meningococcal disease (MenW) in teenagers, England, July 2015 to January 2016. Euro Surveill. 2016;21(12):pii=30175. DOI: http://dx.doi.org/10.2807/1560-7917.ES.2016.21.12.30175

Article submitted on 04 March 2016 / accepted on 24 March 2016 / published on 24 March 2016

MENİNGOKOK ENFEKSİYONLARI-2017
Gastrointestinal Sistem Bulguları

ener çağrı dinleyici

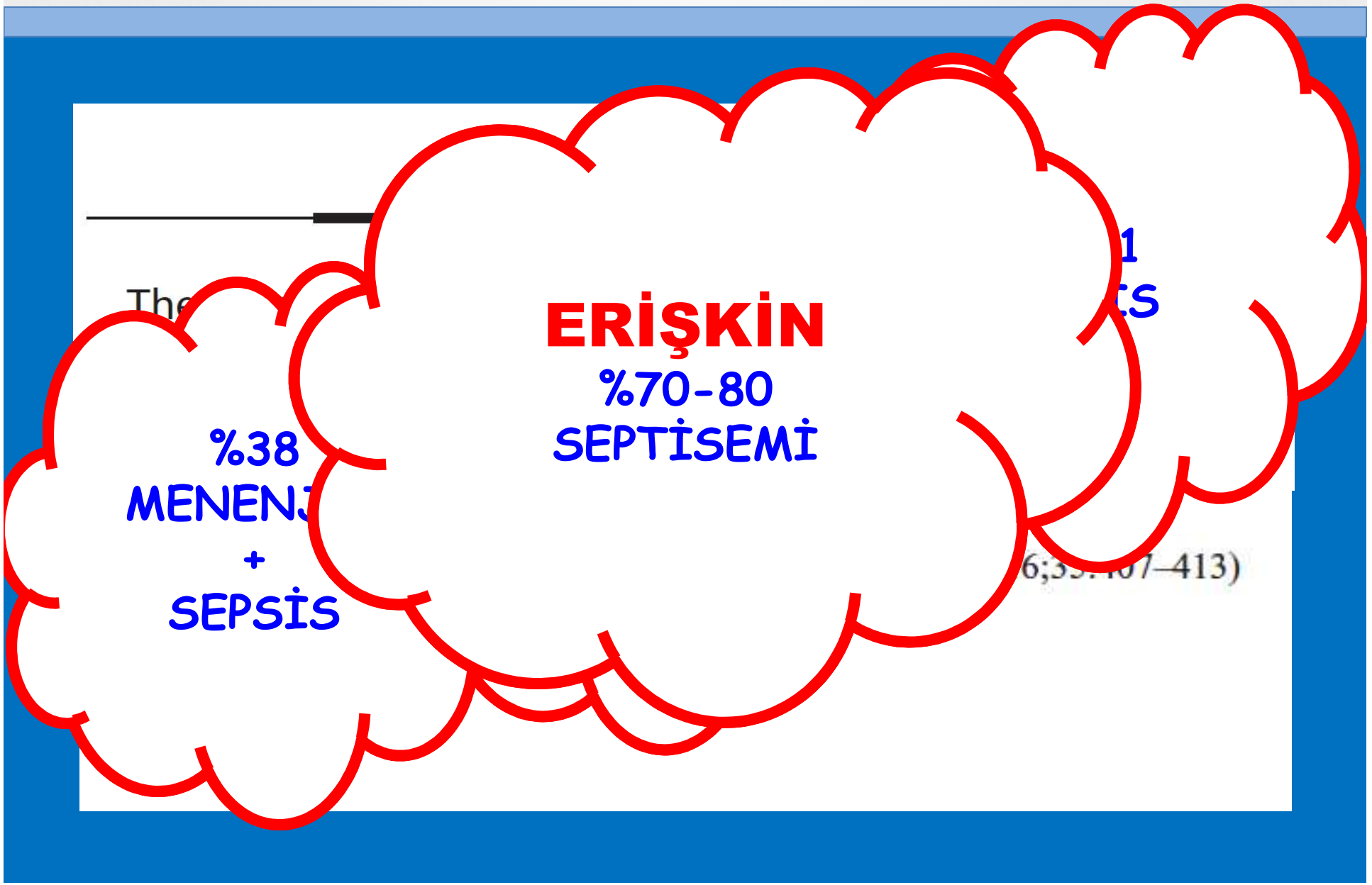
O1.03

Abdominal presentation of invasive meningococcal infections: an underestimated diagnosis

Marion Gros (Bicêtre Hospital, Kremlin Bicêtre, France), Eva Hong (Institut Pasteur, Paris, France), Aude Terrade (Institut Pasteur, Paris, France), Ala-Eddine Deghmane (Institut Pasteur, Paris, France), Muhamed-Kheir Taha (Institut Pasteur, Paris, France), Tamazoust Guiddir (Bicêtre Hospital and Institut Pasteur, Paris, France)

- 103 İnvaziv Meningokok Enfeksiyonu olgusunda GIS bulgusu
- %64 olguda yalnızca KARIN AĞRISI
  - 8 olguda apandisit, 8 olguda peritonit
- %23 olguda gastroenterit (%11 sadece ishal)
- %19 olguda abdominal cerrahi
- Cc11 serogrup W ve C olgularında

MENİNGOKOK ENFEKSİYONLARI-2017
ÇOCUK



İNVAZİV HASTALIK RİSK FAKTÖRLERİ

Lack of serum bactericidal antibodies	Altered immune system	Nasopharyngeal irritation	Social factors
• Infants • Other age groups  	• Complement deficiency • Humoral immune deficiency states • Asplenia • HIV/AIDS • Genetic polymorphisms	• Smoking • Respiratory tract infection 	• Close contact with a case • Crowding • Kissing • Pubs/discos 

İNVAZİV HASTALIK RİSK FAKTÖRLERİ

a slight increase occurred, peaked at 11 years, and declining again through 16 years of age. Ninety-six (60%) children were male. Eighty-six patients were white, 30 were Hispanic, 25 were black, and 10 were other; in 8 cases, the race/ethnicity was unknown.

An underlying condition was present in only 9 (5.6%) patients (complement deficiency detected as a result of the meningococcal infection [2], sickle cell disease [2], congenital hydrocephalus [1], ventricular septal defect [1], lung transplant for cystic fibrosis [1], autoimmune hepatitis [1], and prematurity [1]). One patient (19 years of age) received the meningococcal polysaccharide vaccine 1.5 years before onset of this infection (serogroup B). Three secondary cases of meningococcal disease were identified in the daughter of a baby-sitter, a household contact, and a patient in close proximity in the ICU.

İNVAZİV HASTALIK RİSK FAKTÖRLERİ-2017

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HEREDİTE
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İNVAZİV HASTALIK RİSK FAKTÖRLERİ-2017

ener çağrı dinleyici

RESEARCH

Case–Control Study of Risk Factors for Meningococcal Disease in Chile

Andrea Olea, Isabel Matute, Claudia González, Iris Delgado, Lucy Poffald, Elena Pedroni, Tania Alfaro, Macarena Hirmas, Manuel Nájera, Ana Gormaz, Darío López, Sergio Loayza, Catterina Ferreccio, Doris Gallegos, Rodrigo Fuentes, Pablo Vial, Ximena Aguilera

Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 23, No. 7, July 2017

İNVAZİV HASTALIK RİSK FAKTÖRLERİ-2017

ener çağrı dinleyici

Table 2. Multivariate model of risk factors for development of meningococcal disease in persons <5 years of age for all *Neisseria meningitidis* serogroups, Chile, January 2012–March 2013*

Risk factor	β	SE	p value	OR (95% CI)
Hospitalization for whooping cough	2.94	1.30	0.024	18.86 (1.47–241.87)
Age <1 y	2.04	0.38	<0.001	7.68 (3.68–16.05)
Shared space with other children	1.78	0.63	0.005	5.91 (1.73–20.14)
Hospitalization for asthma or acute lower RTI	1.44	0.41	<0.001	4.24 (1.91–9.44)
History of meningococcal disease in family	1.39	0.46	0.002	4.02 (1.63–9.92)
Shared bed with >2 persons	1.22	0.38	0.001	3.37 (1.62–7.03)
Income <US $517	0.95	0.35	0.007	2.59 (1.30–5.17)
Greeted ≥2 persons with kiss on mouth	0.85	0.37	0.023	2.35 (1.13–4.89)
Constant	–6.87	1.56	<0.001	0.00

*OR, odds ratio; RTI, respiratory tract infection; R^2 = 39%.

Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 23, No. 7, July 2017

İNVAZİV HASTALIK RİSK FAKTÖRLERİ-2017

Table 4. Multivariate model of risk factors for development of meningococcal disease in persons >5 years of age for all *Neisseria meningitidis* serogroups, Chile, January 2012–March 2013*

Risk factor	β	SE	p value	OR (95% CI)
Overcrowding	1.61	0.50	0.001	5.01 (1.87–13.45)
Lived in crowded places	1.51	0.66	0.022	4.54 (1.24–16.67)
Used corticoids	1.46	0.57	0.011	4.29 (1.39–13.21)
Person 14 y of age consuming ≥4 alcoholic drinks	1.30	0.41	0.001	3.68 (1.66–8.19)
Nonrespiratory chronic disease	1.20	0.36	0.001	3.32 (1.64–6.73)
Hospitalization for asthma or acute lower RTI	1.08	0.49	0.028	2.94 (1.12–7.71)
Constant	–6.73	1.69	<0.001	0.00

*OR, odds ratio; RTI, respiratory tract infection; R^2 = 19%.

Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 23, No. 7, July 2017

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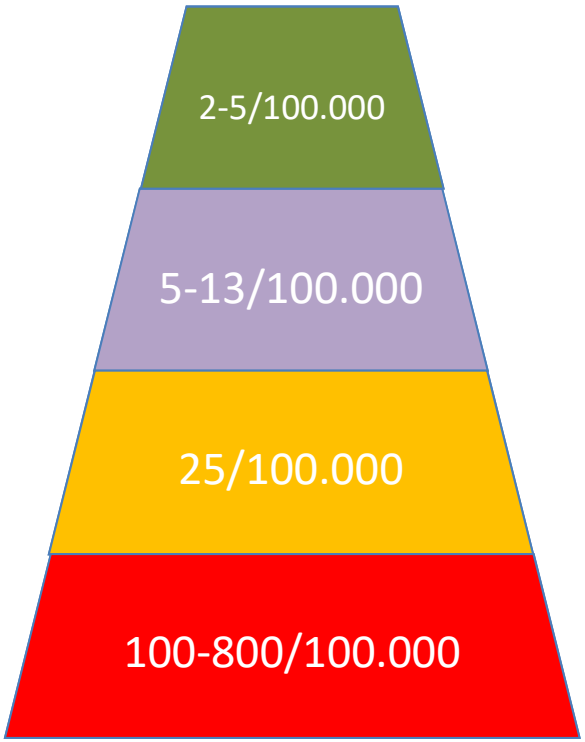

SAĞLIKLI BİREYLER

1-3

ASKERİ BİRLİKLER

YURTLARDA KALAN ÜNİVERSİTE ÖĞRENCİLERİ

HACILAR

AFRİKA MENENJİT KUŞAĞI

İNVAZİV HASTALIK RİSK FAKTÖRLERİ-2017

SAĞLIKLI BİREYLER

ASKERİ BİRLİKLER

YURTLARDA KALAN ÜNİVERSİTE ÖĞRENCİLERİ

HACILAR

AFRİKA MENENJİT KUŞAĞI

İNVAZİV HASTALIK RİSK FAKTÖRLERİ-2017

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Table 1. Statistically significant risk factors for invasive meningococcal disease (univariate analysis).

Variables	Cases (%)	Controls (%)	p-value*
Immigrant	18/44 (40.9%)	20/84 (23.8%)	0.044
Monitoring child's health by the same pediatrician	29/42 (69%)	72/84 (85.7%)	0.027
Father smoker	30/42 (71.4%)	36/82 (43.9%)	0.004
Number of cigarrets per day (fathers)			
(≥20)	26/42 (61.9%)	30/82 (36.6%)	0.004**
(1–19)	4/42 (9.5%)	6/82 (7.3%)	
Density: number of people/ house dimensions (100 m^2) median value (IQR)	5.3 (4.0–6.7)	4.2 (3.2–5.6)	0.019***
Density: ≥ 4.4 (number of people per 100 m^2 house)	25/37 (67.6%)	33/73 (45.2%)	0.026
Contact with cases of IMD	4/41(9.8%)	0/84 (0%)	0.010
History of viral respiratory infection	22/43 (51.2%)	27/84 (32.1%)	0.037
Sore throat	8/43 (18.6%)	4/84 (4.8%)	0.021
Church attendance	12/43 (27.9%)	40/82 (48.8%)	0.024
Relocation or vacation during the previous month	10/43 (23.3%)	6/83 (7.2%)	0.010

*Chi-square test or Fisher's exact test

** Chi-square test for trend

***Mann-Whitney test.

PLOS ONE | DOI:10.1371/journal.pone.0158524 June 28, 2016

İNVAZİV HASTALIK RİSK FAKTÖRLERİ-2017
Kompleman faktör 5 (C5) p.A252T mutasyonu

ener çağrı dinleyici

Format: Abstract ▾ Send to

Clin Exp Immunol. 2017 Apr 1. doi: 10.1111/cei.12967. [Epub ahead of print]

Complement factor 5 (C5) p.A252T mutation is prevalent in, but not restricted to, Sub-Saharan Africa: Implications for the susceptibility to meningococcal disease.

Franco-Jarava C[1], Comas D[2], Orren A[3,4,5], Hernández-González M[1], Colobran R[1].

⊕ Author information

Abstract

Complement C5 deficiency (C5D) is a rare primary immunodeficiency associated with recurrent infections, particularly meningitis by Neisseria species. To date, studies to elucidate the molecular basis of hereditary C5D have included less than 40 families, and most C5 mutations (13/17) have been found in single families. However, the recently described C5 p.A252T mutation is reported to be associated with approximately 7% of meningococcal disease cases in South Africa. This finding raises the question of whether the mutation may be prevalent in other parts of Africa or other continental regions. The aim of this study was to investigate the prevalence of C5 p.A252T in Africa and other regions and discuss the implications for prophylaxis against meningococcal disease. In total, 2710 samples from healthy donors within various populations worldwide were analysed by qPCR assay to detect the C5 p.A252T mutation. Eleven samples were found to be heterozygous for p.A252T, and 9 of these samples were from Sub-Saharan African populations (allele frequency 0.94%). Interestingly, two other heterozygous samples were from individuals in populations outside Africa (Israel and Pakistan). These findings, together with data from genomic variation databases, indicate a 0.5% to 2% prevalence of the C5 p.A252T mutation in heterozygosity in Sub-Saharan Africa. Therefore, this mutation may have a relevant role in meningococcal disease susceptibility in this geographical area.

ATİPİK HEMOLİTİK SENDROM
ECULİZUMAB TEDAVİSİ

Pediatr Nephrol (2016) 31:15–39
DOI 10.1007/s00467-015-3076-8

REVIEW

An international consensus approach to the management of atypical hemolytic uremic syndrome in children

Chantal Loirat · Fadi Fakhouri · Gema Ariceta · Nesrin Besbas · Martin Bitzan · Anna Bjerre · Rosanna Coppo · Francesco Emma · Sally Johnson · Diana Karpman · Daniel Landau · Craig B Langman · Anne-Laure Lapeyraque · Christoph Licht · Carla Nester · Carmine Pecoraro · Magdalena Riedl · Nicole C. A. J. van de Kar · Johan Van de Walle · Marina Vivarelli · Véronique Frémeaux-Bacchi · for HUS International

MMWR / July 14, 2017 / Vol. 66 / No. 27

Morbidity and Mortality Weekly Report

High Risk for Invasive Meningococcal Disease Among Patients Receiving Eculizumab (Soliris) Despite Receipt of Meningococcal Vaccine

Lucy A. McNamara, PhD[1]; Nadav Topaz, MSc[1]; Xin Wang, PhD[1]; Susan Hariri, PhD[1]; LeAnne Fox, MD[1]; Jessica R. MacNeil, MPH[1]

TABLE 1. Meningococcal vaccination status and disease-causing serogroup in eculizumab recipients with meningococcal disease (N = 16) — 10 U.S. jurisdictions, 2008–2016

Characteristic	No. (%)
MenACWY vaccination*	
Yes	14 (88)
No/unknown	2 (12)
MenB vaccination (patients with diagnosis after June 12, 2015)†	
Yes§	3 (75)
No/unknown	1 (25)
Disease-causing serogroup	
B	0 (—)
C	0 (—)
Y	4 (25)
Nongroupable¶	11 (69)
Not determined	1 (6)

KİTLESEL BÜYÜK AKTİVİTELER

As of 19 August 2015, two EU countries, the UK and Sweden, have reported eight cases (five confirmed and three suspected cases) of IMD in scouts and their contacts associated with this event. The meningococcal serogroup W (MenW) strain has been identified as the causative agent in two of the cases in the UK. Preliminary typing suggests that the strain is indistinguishable from the strain that has been increasingly seen in England since 2009. The index case has not been identified. It is not uncommon for young people to be asymptomatic carriers of meningococci, and because the majority of IMD cases result from recent transmission following close contact with an asymptomatic carrier, it is likely that one or several scouts attending the Jamboree were indeed carriers. It has not yet been established if the Swedish and Scottish cases interacted and possibly shared a close contact. However, the number and frequency of close contacts between participants at a Jamboree is expected to be high. It is known that units from Finland, France, Sweden, Switzerland, and the USA stayed in tents close to the UK units at campsites. In addition, a disco was arranged every third day, where all groups at the Jamboree mixed.

Outbreak of invasive meningococcal disease in the EU associated with a mass gathering event, the 23rd World Scout Jamboree, in Japan

KİTLESEL BÜYÜK AKTİVİTELER

ener çağrı dinleyici

Lessons from the Field

Meningococcal disease outbreak related to the World Scout Jamboree in Japan, 2015

Mizue Kanai,[a,b] Hajime Kamiya,[c] Alison Smith-Palmer,[d] Hideyuki Takahashi,[e] Yushi Hachisu,[a] Munehisa Fukusumi,[c,f] Takehito Saitoh,[c] Makoto Ohnishi,[e] Tomimasa Sunagawa,[c] Tamano Matsui[c] and Kazunori Oishi[c]

Correspondence to Hajime Kamiya (email: hakamiya@niid.go.jp)

WPSAR Vol 8, No 2, 2017 | doi: 10.5365/wpsar.2016.7.3.007

İNVAZİV HASTALIK RİSK FAKTÖRLERİ
MENİNGOKOK B SALGIN

- 2013–2014 Princeton University with nine cases, an additional Drexel University student died
- 2013 University of California—Santa Barbara with four cases
- 2015 Providence College with two cases
- 2015 University of Oregon with seven cases, one death
- 2016 Santa Clara University with three cases
- 2016 Rutgers University with three cases
- 2016 University of Wisconsin—Madison with three cases
- 2016–2017 Oregon State University with three cases

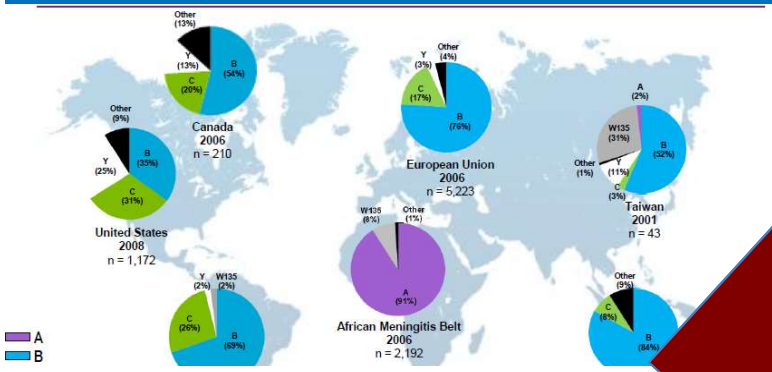
Curr Infect Dis Rep (2017) 19: 30
DOI 10.1007/s11908-017-0587-4

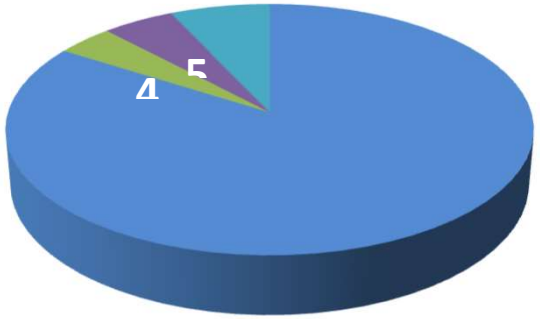
NEUROLOGICAL INFECTIONS (J LYONS, SECTION EDITOR)

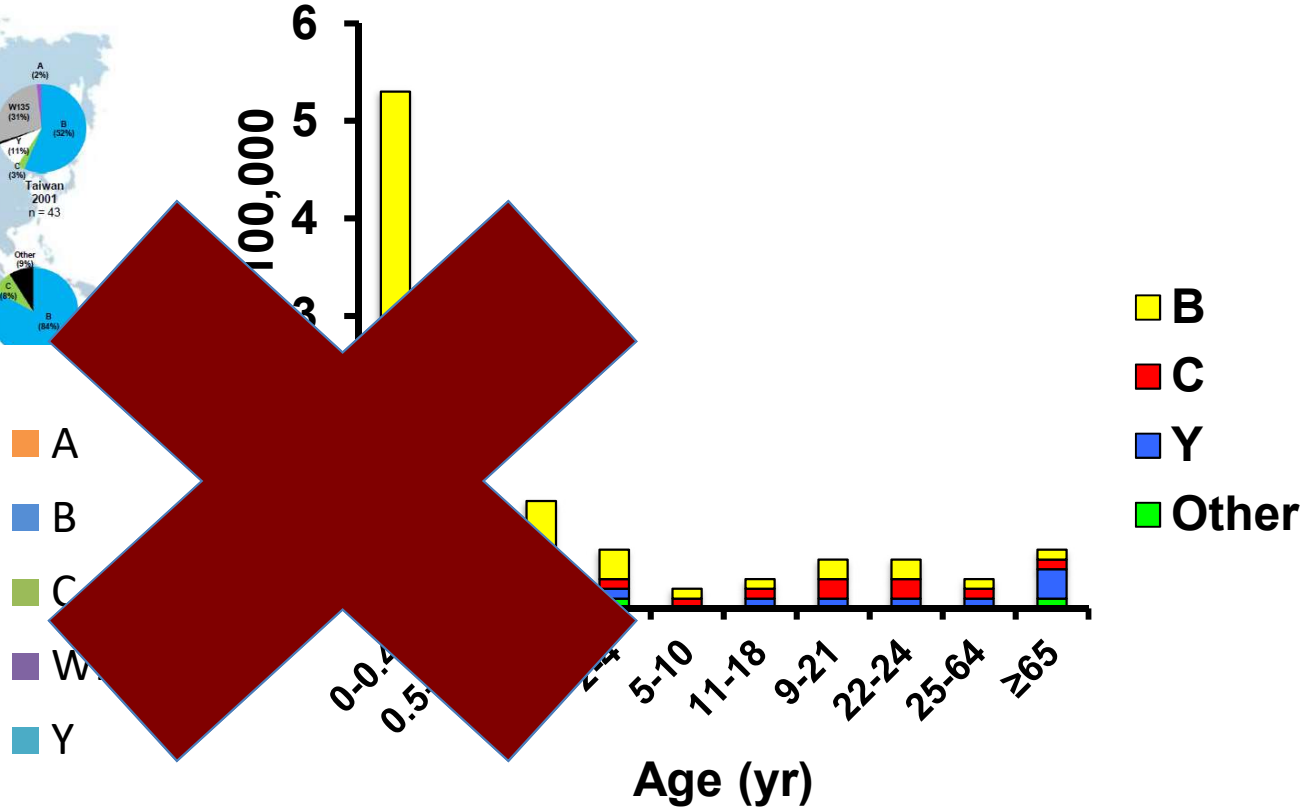
Serogroup B Meningococcus Outbreaks, Prevalence, and the Case for Standard Vaccination

James Grogan[1] · Karen Roos[1]

MENİNGOKOK SEROEPİDEMİYOLOJİ





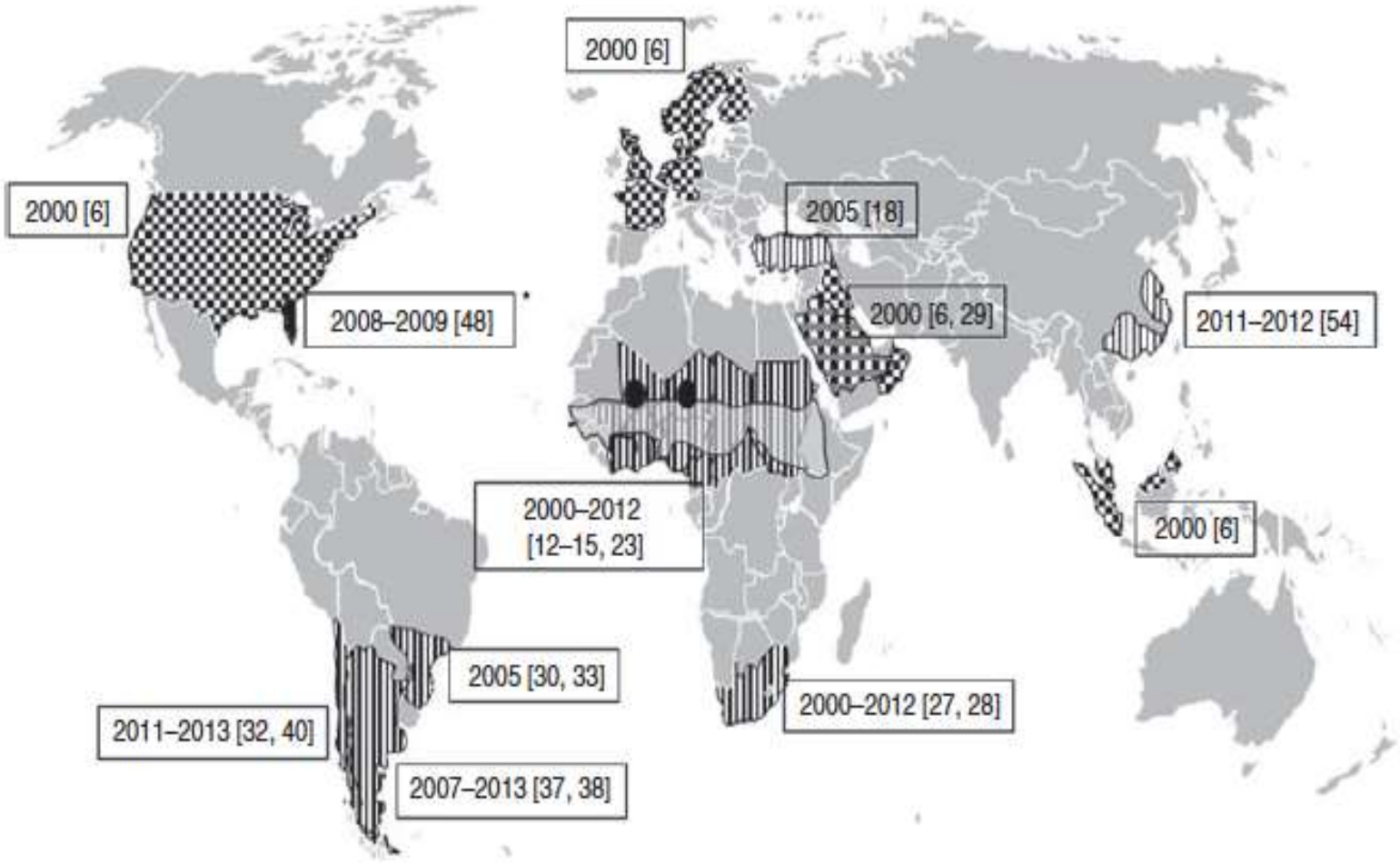


The epidemiology of meningococcal disease in Latin America 1945–2010: an unpredictable and changing landscape

M. A. P. SÁFADI, S. GONZÁLEZ-AYALA, A. JÄKEL, H. WIEFFER, C. MORENO and A. VYSE

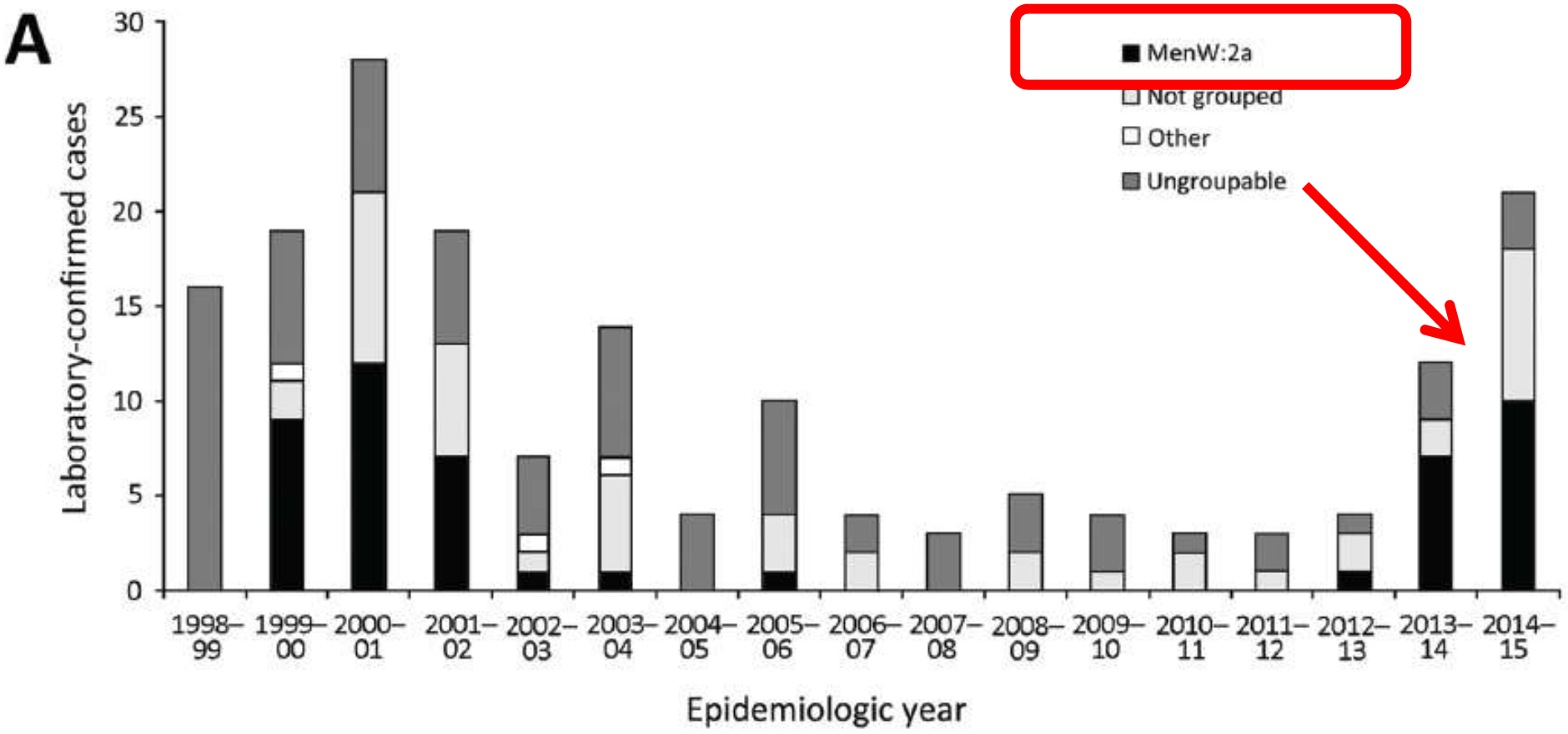
Epidemiology and Infection / *FirstView* Article / January 2006, pp 1 - 12
DOI: 10.1017/S0950268812001689, Published online: 09 August 2012

SEROGRUP W


2000 [6]
2000 [6]
2005 [18]
2008–2009 [48]
2000 [6, 29]
2011–2012 [54]
2000–2012
[12–15, 23]
2000 [6]
2005 [30, 33]
2011–2013 [32, 40]
2000–2012 [27, 28]
2007–2013 [37, 38]

MENİNGOKOK ENFEKSİYONLARI-İNGİLTERE 2016

Meningococcal Group W Disease in Infants and Potential Prevention by Vaccination



İNVAZİ
MENİ

ener çağrı dinleyici

RAPID COMMUN

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C Bassi [1], M Taha [2]
1. Santé publique F
2. National Referen
3. Regional Health
4. Santé publique F
5. These authors cc

Correspondence: Cl

Citation style for this art
Bassi C, Taha M, Merle C
serogroup W among univ
ES.2017.22.28.30574

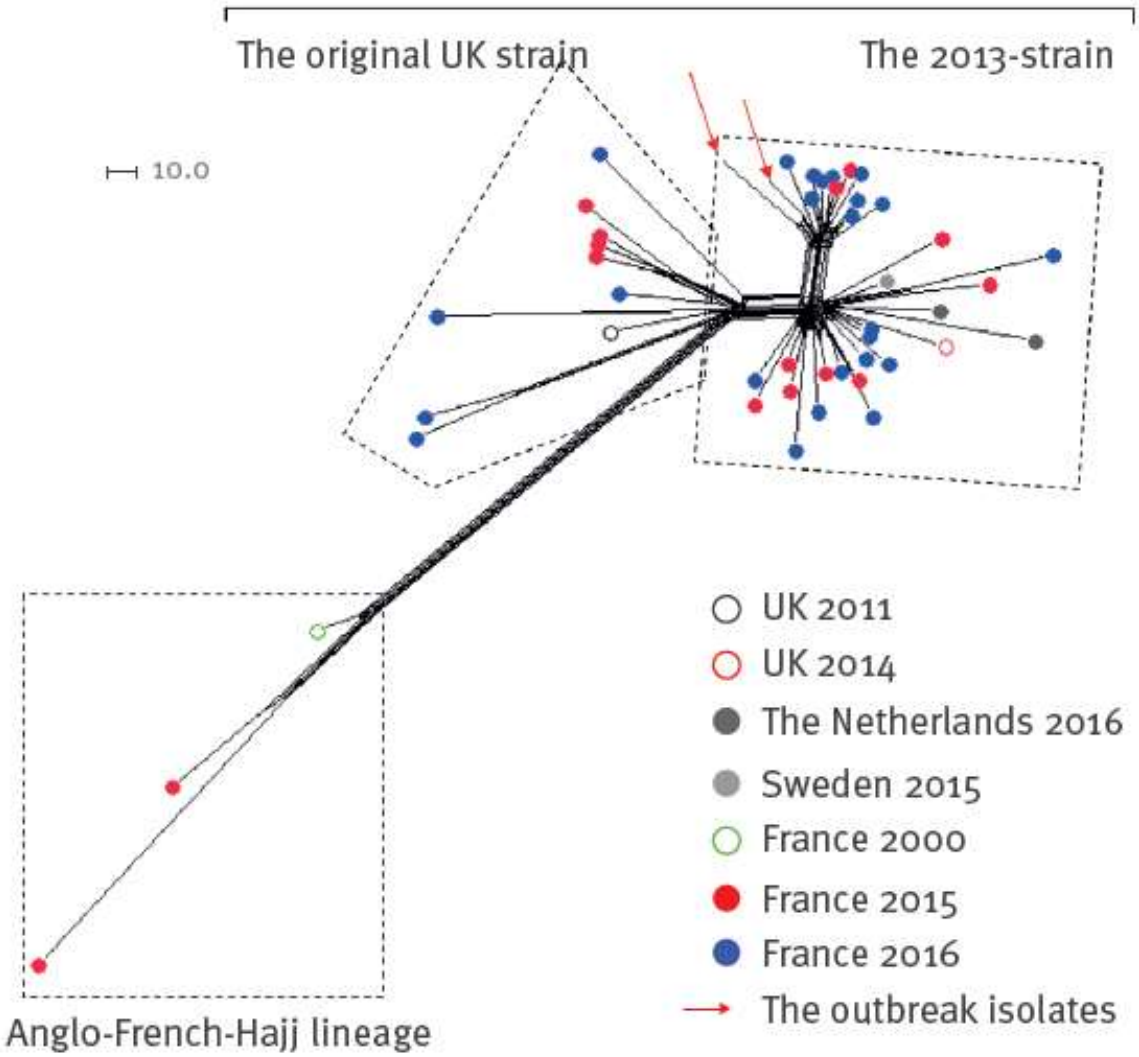
D)
nong
7

ce
ce

y Neisseria meningitidis
7/1560-7917.

FIGURE

Phylogenetic network of group W/clonal complex (cc)11 isolates, France, 2015–2016 (n = 47)



SEROGRUP W HOLLANDA

- HOLLANDA
- 2015 yılına kadar yılda 4-5 olgu iken 2016 ve 2017 yıllarında 50 olgu bildirilmiş.
- Septisemi ve pnömoni en sık başvuru şekli
- 1 yaş altı olgu az, daha çok genç erişkin ve yaşlılarda
- %93 olgu yeni Serogrup W- cc11 (UK-2013 strain)

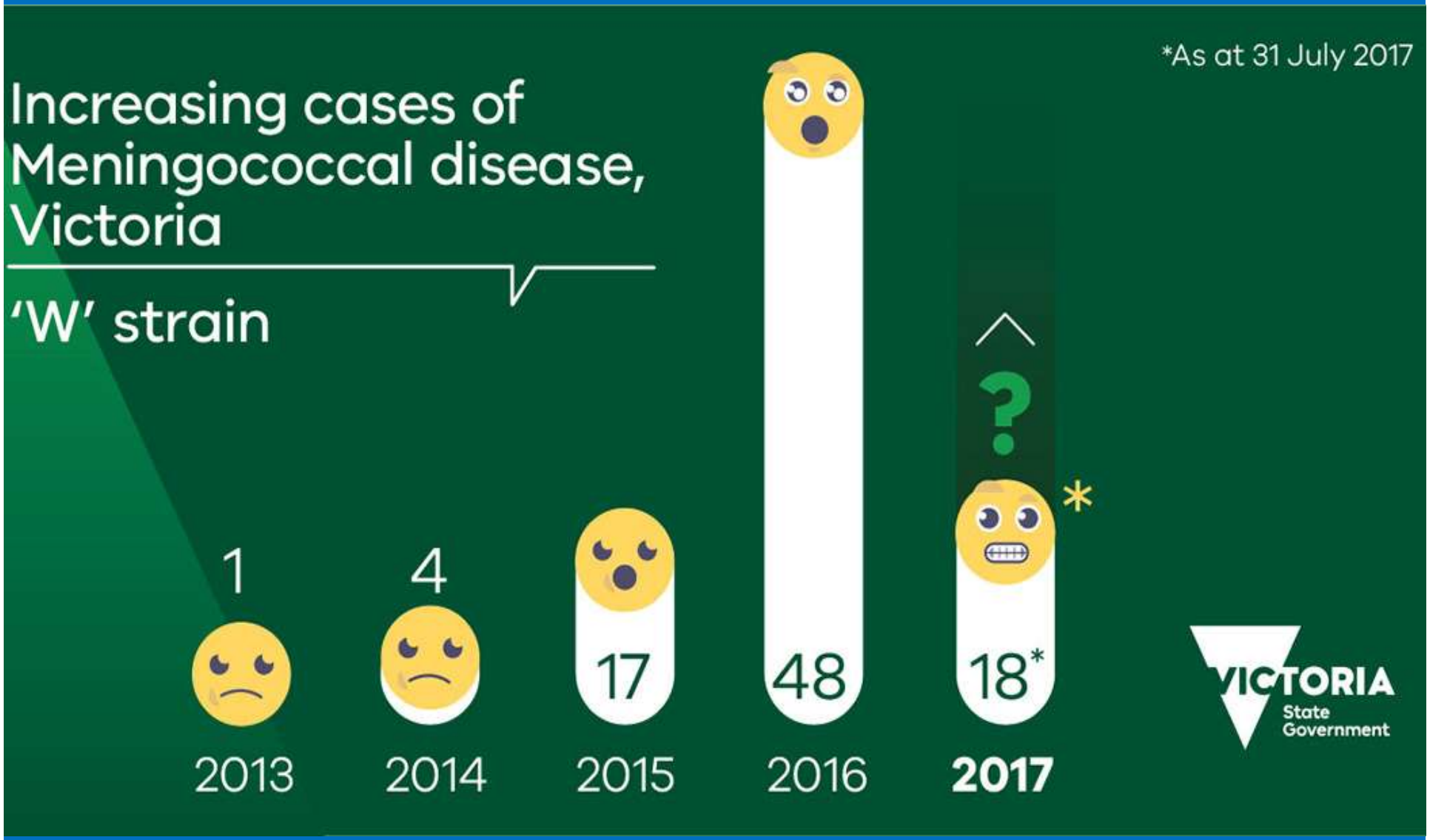
SEROGRUP W FRANSA

- FRANSA
- 2015-2016 yılında hasta sıklığında artış
- 2 üniversite öğrencisinin ölümü sonrası aşı kampanyası
- 2016 yılında 45 yeni serogrup W olgusu
- Daha çok genç erişkin ve yaşlılarda
- % 83.3 septisemi
- CFR %24 (serogrup B için %8, C %12, y %16)
- Serogrup W- cc11 (UK-2013 strain)

SEROGRUP W İSPANYA

- İSPANYA
- 2015 yılında 15 yaş üstü sporadik vakalar ile başlamış, 2016-2017'de tüm yaş gruplarında görülmeye başlandı.
- IMD sıklığı halen düşük, en sık serogrup B ancak W sıklığı 2 kat artmış
- Yeni olguların tamamı CC11 (UK-2013 strain)

SEROGRUP W AVUSTRALYA



MENİNGOKOK
TAŞIYICILIK

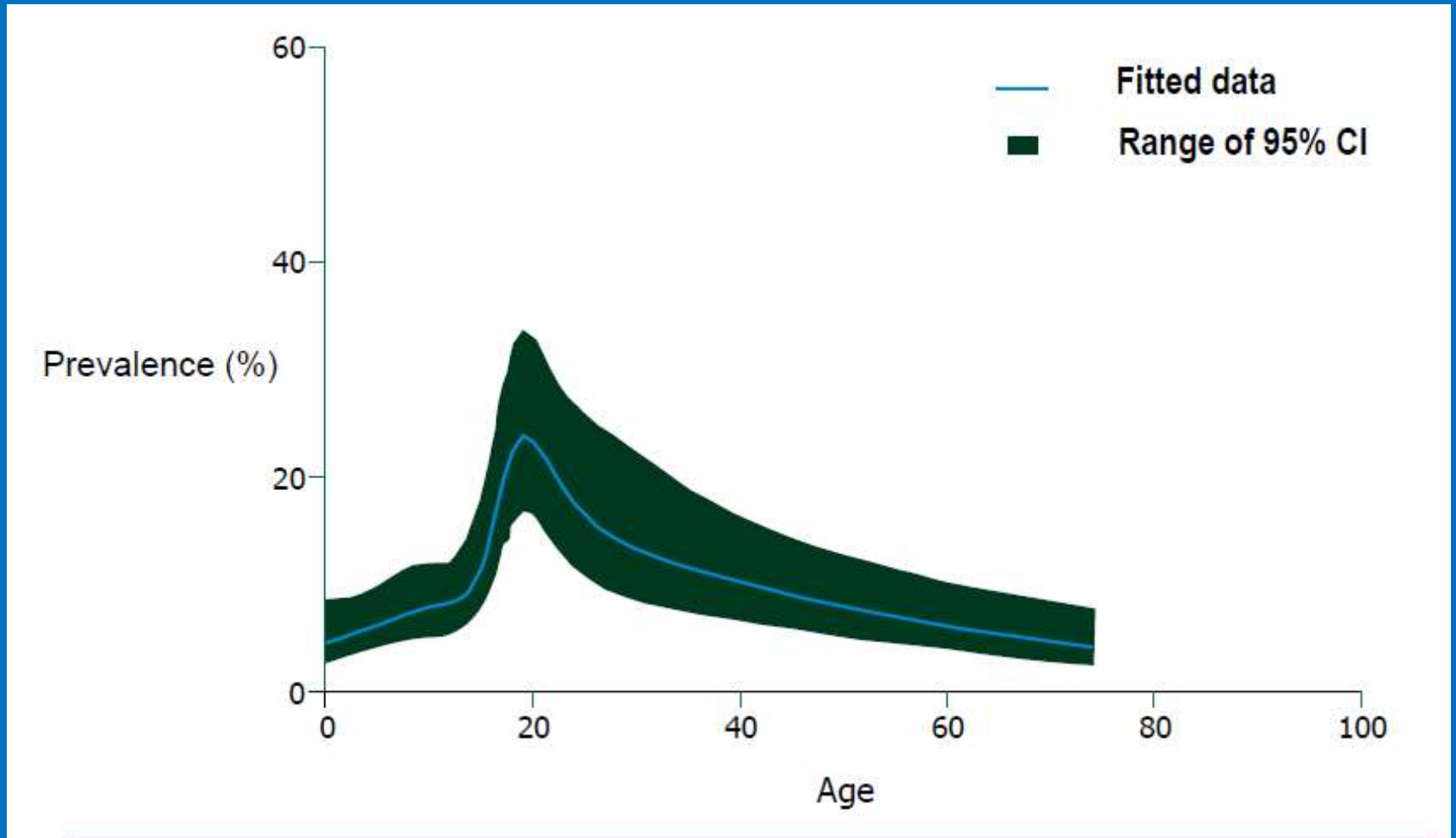
REVIEW 10.1111/1469-0691.12647

Neisseria meningitidis; clones, carriage, and disease

R. C. Read

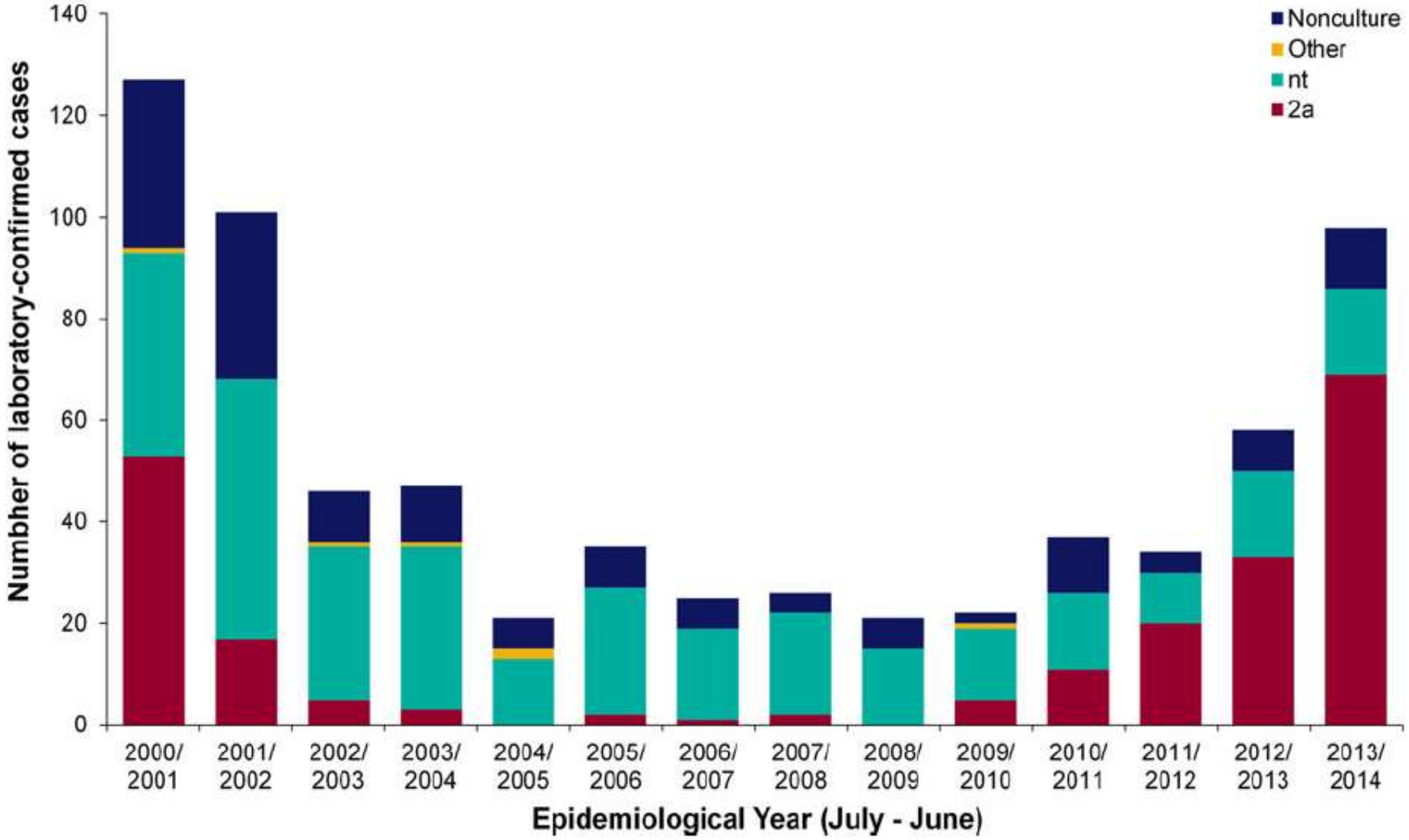
Clinical and Experimental Sciences and NIHR Respiratory Biomedical Research Unit, Faculty of Medicine, University of Southampton, Southampton General Hospital, Southampton, UK

MENINGOCOCCAL TAŞIYICILIK
28 ÜLKEDEN 89 ÇALIŞMA



Christensen H et al. Lancet Infect Dis. 2010;10:853.

MENİNGOKOK
TAŞIYICILIK İNGİLTERE



MENİNGOKOK
TAŞIYICILIK SIKLIĞINDA YILLAR İÇERSİNDE

ener çağrı dinleyici

WS.02

Recent changes in meningococcal epidemiology in Australia and implementation of a population study to investigate the impact of 4CMenB vaccination on meningococcal carriage in South Australian adolescents

O5.01

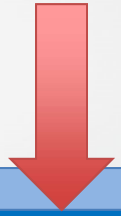
Risk Factors for Carriage of *Neisseria meningitidis* in British Teenagers associated with changing disease incidence

Jenny M MacLennan *(Department of Zoology, University of Oxford, Oxford, UK),* ***Martin CJ Maiden*** *(Department of Zoology, University of Oxford, Oxford, UK),* ***UK Meningococcal Carriage Consortium*** *(Various Institutions, Cardiff, Glasgow, London, Oxford, Plymouth, Stockport, Bristol, Manchester, Wigan, Preston, and Maidstone, UK)*

14th Congress of the EMGM, European Meningococcal and Haemophilus Disease Society
September 18-21, 2017 | Prague, Czech Republic
www.emgm2017.cz

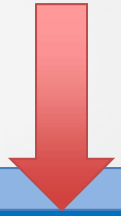
EMGM 2017 PRAGUE

MENİNGOKOK
TAŞIYICILIK SIKLIĞINDA YILLAR İÇERSİNDE



- İngiltere
- 2014 yılında 15-19 yaş taşıyıcılık **% 7** (N: 19.119)
  - 1999 yılında %16.7
  - 2000 yılında %17.7
  - 2001 yıllarında %18.7
- Risk faktörleri
  - Yaş, antibiyotik kullanımı, aktif sigara içiciliği, elektronik sigara, nargile, bar-kafe-gece klubüne gitme, erkek ya da kız arkadaş varlığı

MENİNGOKOK
TAŞIYICILIK SIKLIĞINDA YILLAR İÇERSİNDE



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Fear Of Missing Out, or FOMO, as it's known among millennials, is the phenomenon of always feeling like you are missing out on an importa one. This phenom to social media t ooler things than yo ched on!

MENİNGOKOK TAŞIYICILIK HAC 2017

ener çağrı dinleyici

ARTICLE IN PRESS

Vaccine xxx (2017) xxx–xxx

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Neisseria meningitidis nasopharyngeal carriage during the Hajj: A cohort study evaluating the need for ciprofloxacin prophylaxis

Ziad A. Memish [a,b,c,*], Jaffar A. Al-Tawfiq [d,e], Malak Almasri [a], Esam I. Azhar [f,g], Muhammad Yasir [f], Muneera S. Al-Saeed [f], Huda Ben Helaby [f], Ray Borrow [h], Abdulhafeez Turkistani [a], Abdallah Assiri [a]

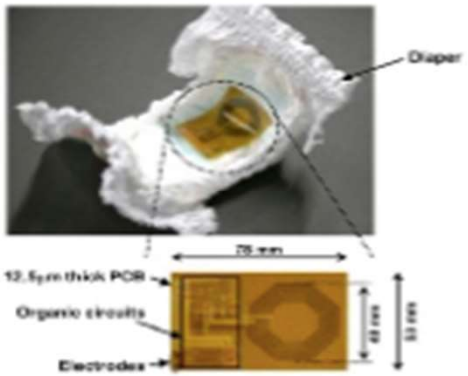
MENİNGOKOK TAŞIYICILIK HAC 2017

ener çağrı dinleyici

Table 2
Characteristics and Carriage Rates of *N. meningitidis* and *H. influenzae* of Paired Pilgrims.

	Number of Nasopharyngeal swabs	Previous influenza vaccination n (%)	Previous pneumococcal vaccination, n (%)	Carriage *Neisseria meningitidis* at arrival, n (%)	Carriage *Neisseria meningitidis* at departure, n (%)	Genogroup B *Neisseria meningitidis* at arrival, n (%)	Genogroup B *Neisseria meningitidis* at departure, n (%)
High Risk Countries							
Ethiopia	64	0 (0)	0 (0)	4 (6.2)	0 (0)	3 (4.6)	0 (0)
Tanzania	72	0 (0)	0 (0)	1 (1.3)	2 (2.7)	1 (1.3)	2 (2.7)
Subtotal	136 (21.6)	0 (0)	0 (0)	5 (3.6)	2 (1.4)	4 (2.9)	2 (1.4)
Medium Risk Countries							
India	73	1 (1.3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Pakistan	89	84 (94.3)	0 (0)	1 (1.1)	0 (0)	1 (1.1)	0 (0)
Bangladesh	27	18 (66.6)	0 (0)	1 (3.7)	1 (3.7)	1 (3.7)	1 (3.7)
Egypt	86	3 (3.4)	0 (0)	1 (1.1)	1 (1.1)	1 (1.1)	1 (1.1)
Somalia	50	0 (0)	0 (0)	6 (12.0)	1 (0)	5 (10.0)	1 (2.0)
Subtotal	325 (51.7)	106 (32.6)	1 (0)	9 (2.7)	3 (0.9)	8 (2.4)	3 (1.0)
Low Risk Countries							
Indonesia	59	34 (57.6)	0 (0)	1 (1.6)	0 (0)	1 (1.6)	0 (0)
Malaysia	68	12 (17.6)	12 (17.6)	0 (0)	1 (1.4)	0 (0)	1 (1.4)
USA	40	2 (3.4)	2 (5.0)	1 (2.5)	1 (2.5)	1 (2.5)	2 (5.0)
Subtotal	167 (26.6)	48 (28.7)	14 (8.34)	2 (1.2)	2 (1.2)	2 (1.2)	3 (1.7)
Grand Total	628 (100)	154 (24.5)	14 (2.2)	16 (2.5)	8 (1.2)	14 (2.2)	8 (1.2)

GELECEK



İNVAZİV MENİNGOKOK ENFEKSİYONLARI TÜRKİYE

Journal of Infection (2017) 75, 1–11

ELSEVIER

BIAM British Infection Association

www.elsevierhealth.com/journals/jinf

REVIEW

Meningococcal disease in the Middle East and Africa: Findings and updates from the Global Meningococcal Initiative

Ray Borrow [a,*], Dominique A. Caugant [b], Mehmet Ceyhan [c], Hannah Christensen [d], Ener Cagri Dinleyici [e], Jamie Findlow [a], Linda Glennie [f], Anne Von Gottberg [g], Amel Kechrid [h], Julio Vázquez Moreno [i], Aziza Razki [j], Vincent Smith [f], Muhamed-Kheir Taha [k], Hassiba Tali-Maamar [l], Khalid Zerouali [m], on behalf of the Global Meningococcal Initiative (GMI)

EPİDEMİYOLOJİ
TÜRKİYE

Editorial

The dynamic and changing epidemiology of meningococcal disease at the country-based level: the experience in Turkey

Expert Rev. Vaccines 11(5), 00–00 (2012)

EnerCagri Dinleyici

Eskisehir Osmangazi Medical Faculty, Department of Pediatrics, Eskisehir, Turkey
Tel.: +90 222 239 2979/2722
dinboothir@yahoo.com

Mehmet Ceyhan

Faculty of Medicine, Department of Pediatrics, Pediatric Infectious Disease Unit, Hacettepe University, Ankara, Turkey
meyhan@hacettepe.edu.tr

"Changes in the epidemiology of invasive meningococcal disease over time in Turkey has shown that continued surveillance of meningococcal disease is essential."

Invasive meningococcal disease (IMD) is an important condition, affecting more than 500,000 people worldwide, resulting in approximately 50,000 deaths and 10–20% severe long-term complications [1,2]. The reported incidence of IMD varies by region, ranging from less than 0.5 cases per 100,000 in North America and less than one case per 100,000 in Europe to 10–1000 cases per 100,000 people during epidemic years in Africa [2]. There

basis of the Turkish Statistical Institute (TurkStat) data, 1982–3985 cases per year were reported as IMD. According to the TurkStat data since 2009, IMD are responsible for 10% of all causes of mortality for children younger than 5 years of age [101]. On the basis of the Ministry of Health (MoH) records, the case numbers are lower than those of the TurkStat reports. Between 1989 and 1999, the incidence of IMD varied between 1 and 35

Dinleyici EC, Ceyhan M. Expert Rev Vaccines 2012, May

EPİDEMİYOLOJİ
TÜRKİYE

- Ceyhan ve ark. 2005-2012 yılları arasında Türkiye'deki çocuk nüfusunun >%30'dan fazlasını değerlendirme;
- Özellikle sütçocuklarında sık.
- Adölesan piki 2005 yılından sonraki çalışmalarda gözlenmedi.
- Menenjit için insidans 100.000'de 1.99
- Toplam invaziv meningokok enfeksiyonu 4/100.000

EPİDEMİYOLOJİ
TÜRKİYE

ener çağrı dinleyici

RESEARCH PAPER

Human Vaccines & Immunotherapeutics 10:09, 1–7; October 1, 2014; © 2014 Taylor & Francis Group, LLC

Meningitis Caused By Neisseria Meningitidis,

Study Period (Year)	2005–2012	
Causative Bacteria	n	%
Serogroup W-135	127	38.1
Serogroup B	87	26.1
Serogroup A	28	8.4
Serogroup C	0	0
Serogroup Y	3	0.9
Nongroupable	88	26.4
N. meningitidis (Total)	333	51.6
S. pneumonia	195	30.2
H. influenzae type b	117	18.1
Total number of Positive Samples	645	100
Total number of Evaluated Clinical Samples	1452	NA

EPİDEMİYOLOJİ
TÜRKİYE

Human Vaccines & Immunotherapeutics

ISSN: 2164-5515 (Print) 2164-554X (Online) Journal homepage: http://www.tandfonline.com/loi/khvi20

Bacterial Agents Causing Meningitis During 2013–2014 In Turkey: A Multi-Center Hospital-Based Prospective Surveillance Study

Mehmet Ceyhan, Yasemin Ozsurekci, Nezahat Gürler, Eda Karadag Oncel, Yıldız Camcioglu, Nuran Salman, Melda Celik, Melike Keser Emiroglu, Fatih Akin, Hasan Tezer, Aslinur Ozkaya Parlakay, Nilden Tuygun, Diyar Tamburaci, Ener Cagri Dinleyici, Adem Karbuz, Ünal Uluca, Emre Alhan,

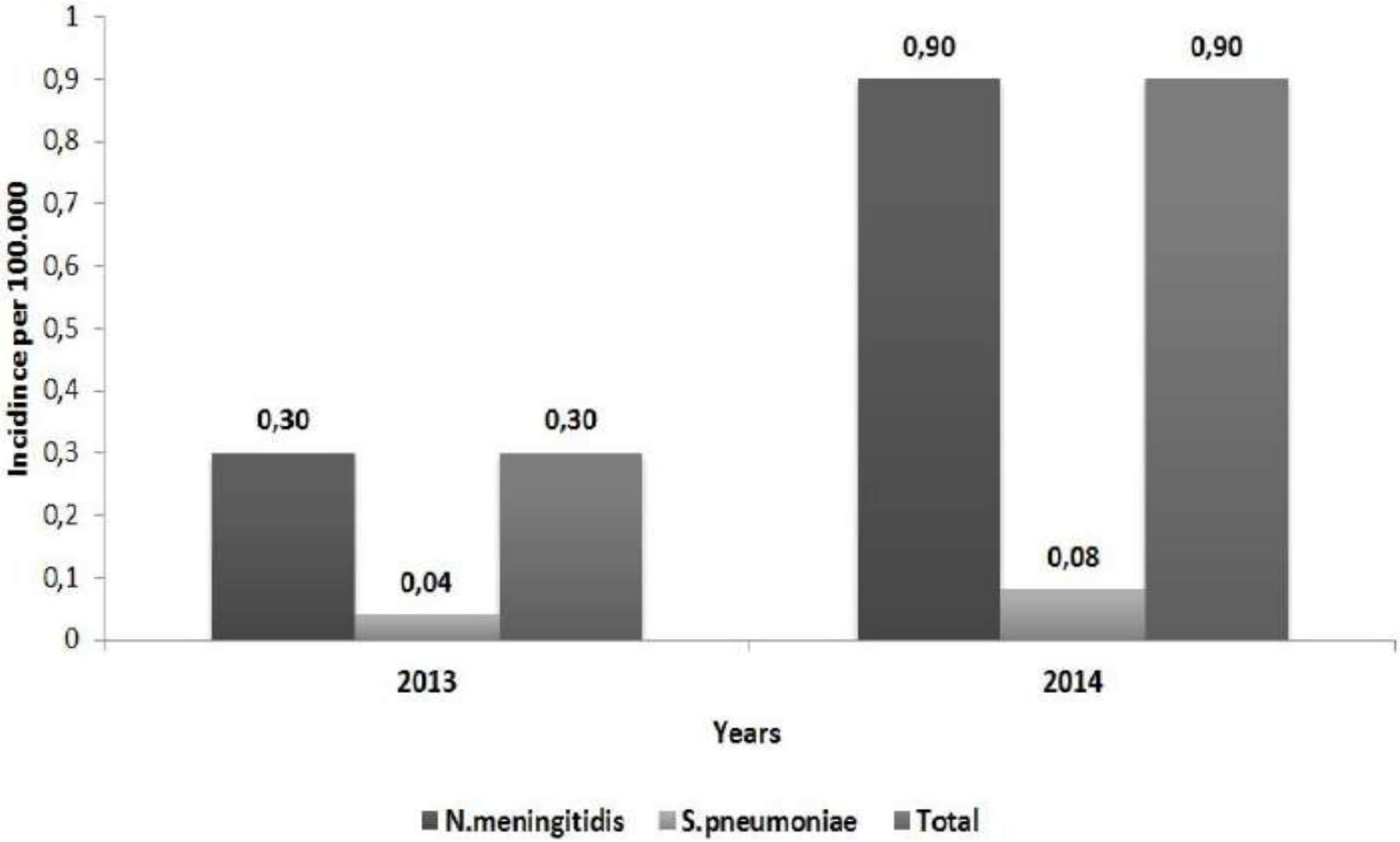
EPİDEMİYOLOJİ
TÜRKİYE 2013

Bakteri	İzolat sayısı	Yüzde (%)
Neisseria meningitidis		
Serogroup W	7	36.8
Serogroup B	5	26.4
Serogroup A	-	
Serogroup C	-	-
Serogroup Y	-	-
Nongroupable	7	36.8
Total	19	86.4
Streptococcus pneumoniae	3	13.2
Haemophilus influenza type b	-	-
Total	22	100

EPİDEMİYOLOJİ
TÜRKİYE 2014

Bakteri	İzolat sayısı	Yüzde (%)
Neisseria meningitidis		
Serogroup W	29	43.9
Serogroup B	23	34.9
Serogroup A	3	4.5
Serogroup C	-	-
Serogroup Y	2	3.0
Nongroupable	9	13.7
Total	66	91.7
Streptococcus pneumoniae	9	8.3
Haemophilus influenza type b	-	-
Total	75	100

EPİDEMİYOLOJİ
TÜRKİYE -MENENJİT



TÜRKİYE TAŞIYICILIK -2017

Human Vaccines & Immunotherapeutics

ISSN: 2164-5515 (Print) 2164-554X (Online) Journal homepage: http://www.tandfonline.com/loi/khvi20

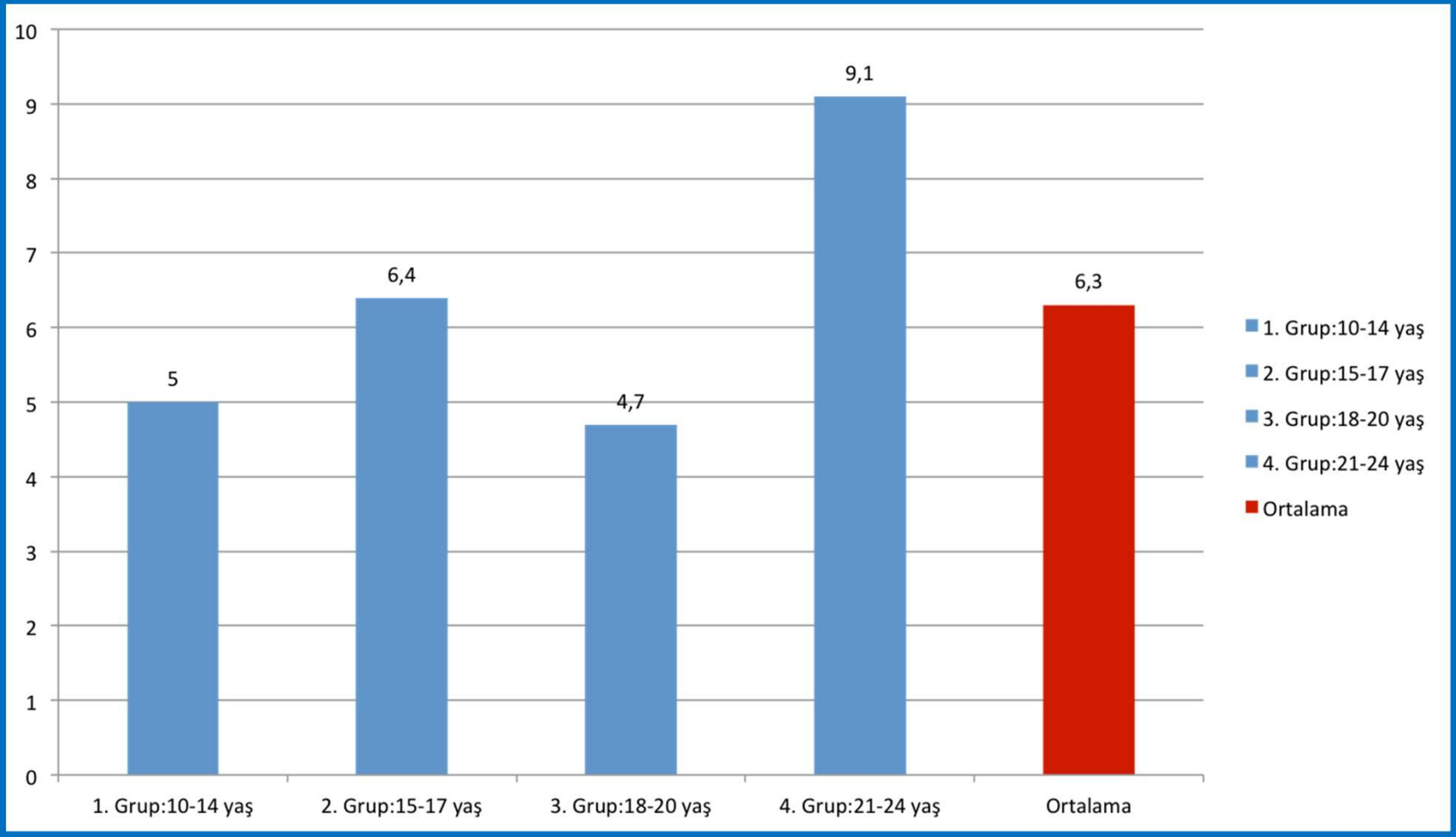
The prevalence, serogroup distribution and risk factors of meningococcal carriage in adolescents and young adults in Turkey

Rahmi Tuna Tekin, Ener Cagri Dinleyici, Mehmet Ceyhan, Adem Karbuz, Nuran Salman, Murat Sutçu, Zafer Kurugol, Yasemin Balliel, Melda Celik, Mustafa Hacimustafaoglu, Necdet Kuyucu, Meda Kondolot, Gülnar Sensoy, Ozge Metin, Soner Sertan Kara, Meltem Dinleyici, Omer Kılıç, Cihangul Bayhan, Venhar Gurbuz, Emre Aycan, Aygun Memedova, Arzu Karli, Gulçin Bozlu & Solmaz Celebi

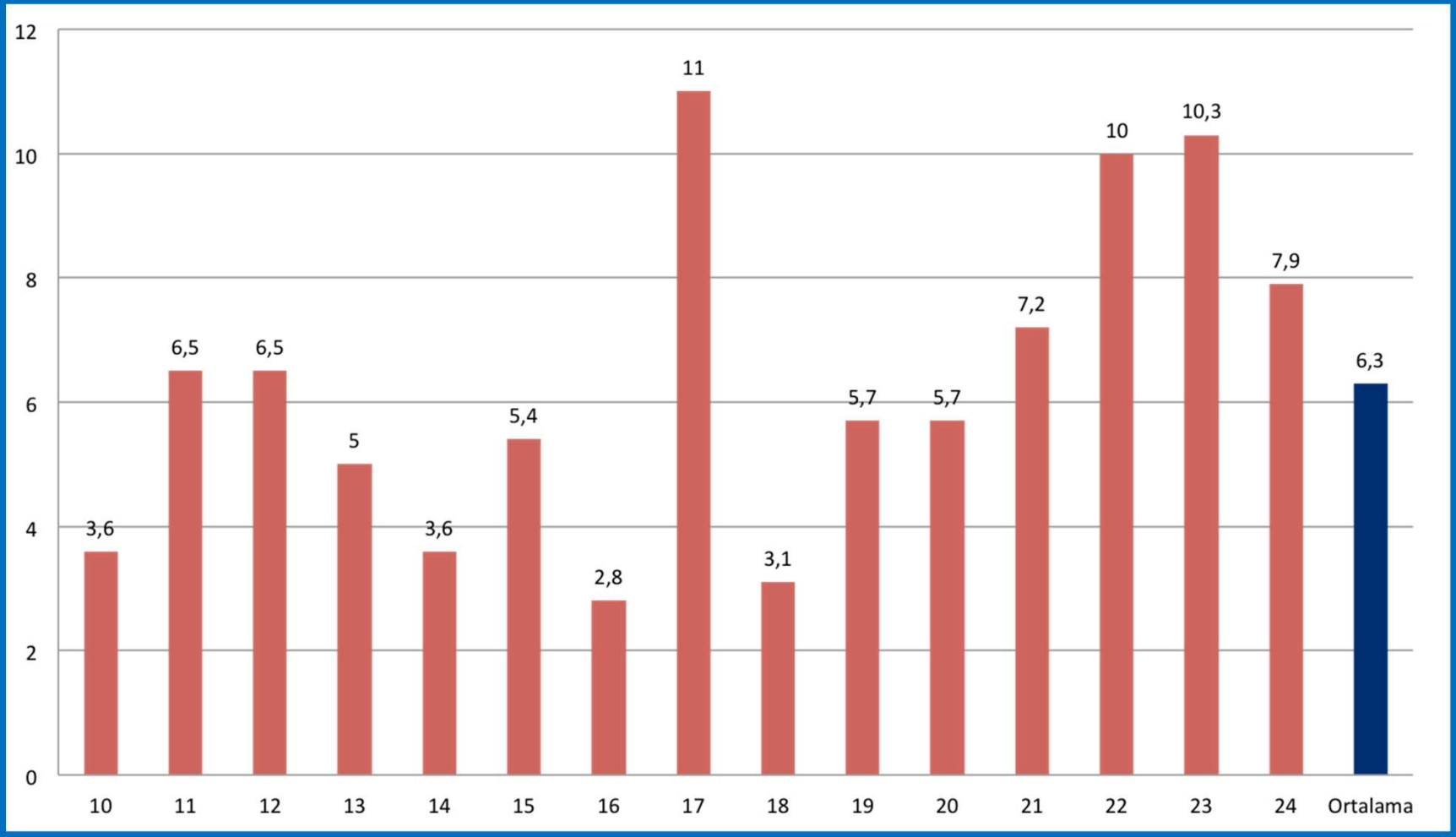
MENINGO-CARR ÇALIŞMASI TÜRKİYE (Tekin et al. 2017)

- 10-24 yaş adölesan ve genç erişkinlerde N. meningitidis sıklığı, serogrup tayini ve risk faktörlerinin belirlenmesi
  - PCR
- İstanbul, Ankara, İzmir, Bursa, Eskişehir, Antalya, Kayseri, Samsun, Şanlıurfa, Mersin
- Temsil gücü %65-70
- Örneklem büyüklüğü: 1533

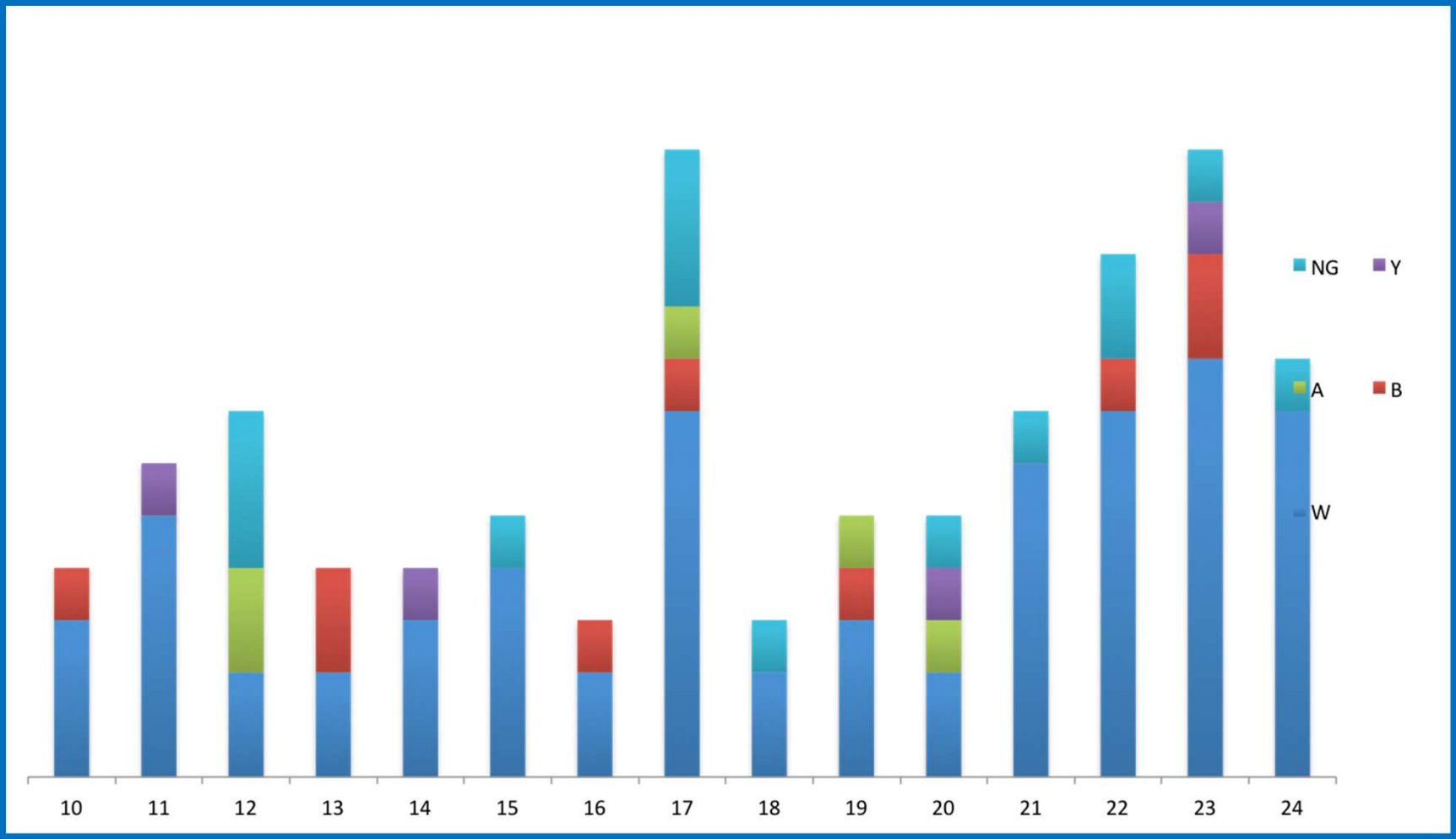
MENINGO-CARR ÇALIŞMASI
TÜRKİYE (Tekin et al. 2017)



MENINGO-CARR ÇALIŞMASI
TÜRKİYE (Tekin et al. 2017)



MENINGO-CARR ÇALIŞMASI
TÜRKİYE (Tekin et al. 2017)



MENINGO-CARR 2 ÇALIŞMASI TÜRKİYE (2018)

- 0-18 çocuk ve adölesanlarda *N. meningitidis* sıklığı, serogrup tayini ve risk faktörlerinin belirlenmesi
  - PCR
- İstanbul, Ankara, İzmir, Bursa, Eskişehir, Antalya, Kayseri, Samsun, Şanlıurfa, Mersin
- Temsil gücü %65-70
- Örneklem büyüklüğü: 1600
- Başlangıç tarihi: Kasım 2017

GURBETÇİLERDEN TÜRKİYE'YE MENİNGOKOK??

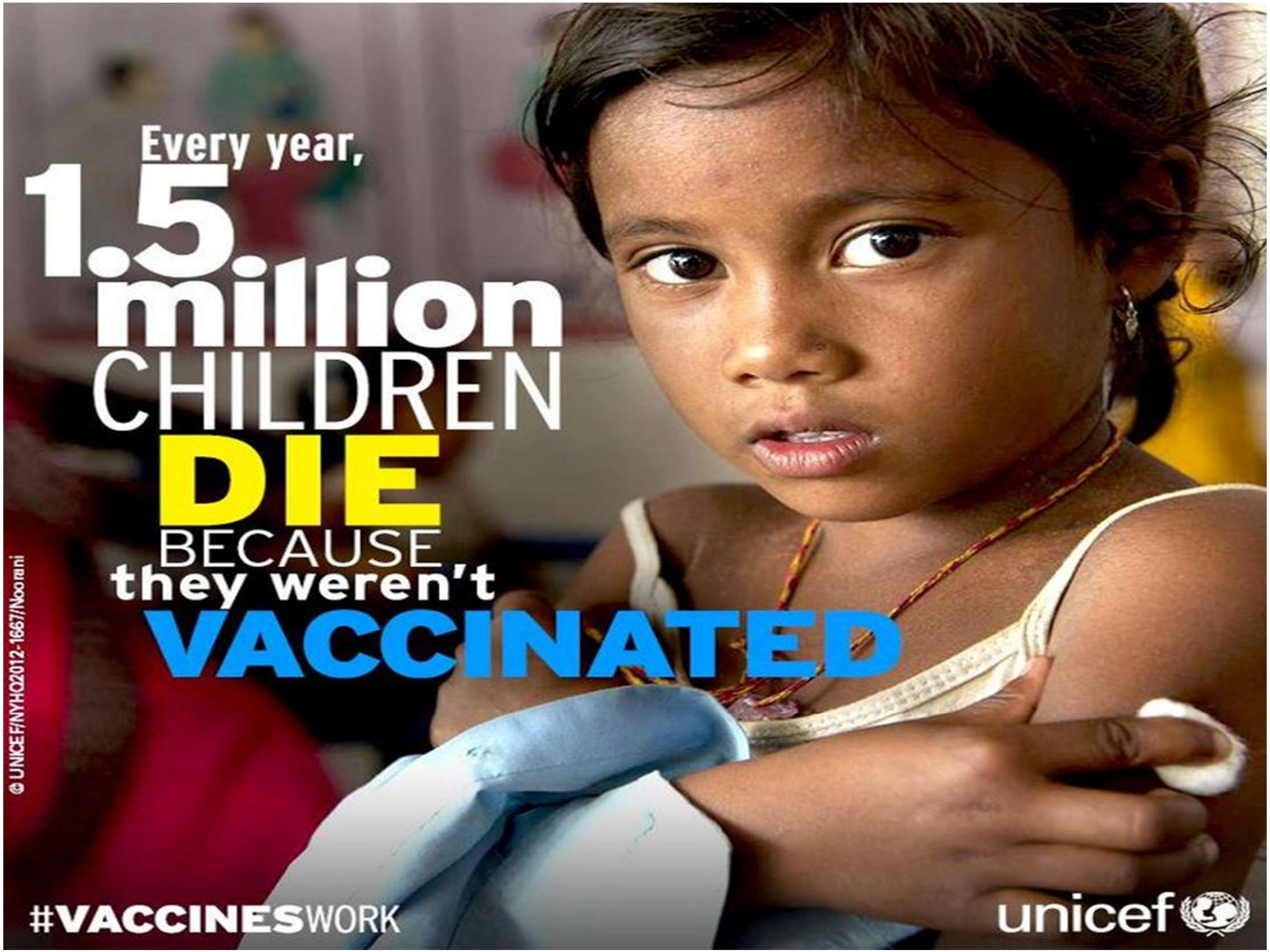
P55

Nasopharyngeal meningococcal carriage rate and serogroup distribution of Turkish citizens lived in Belgium, Germany and Netherlands during their visit to Turkey

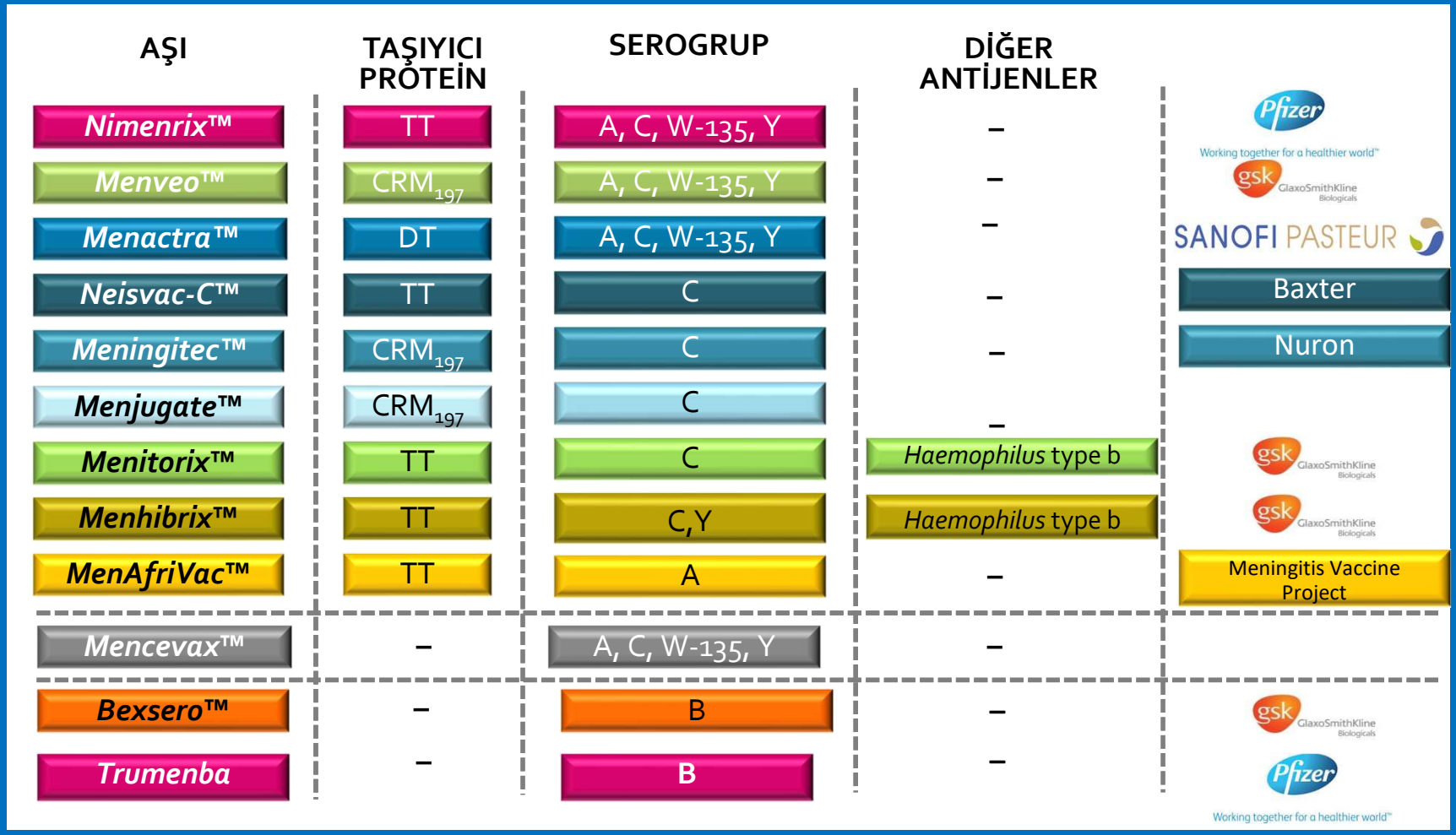
Pinar Gorunmez (Department of Family Medicine, Eskisehir Osmangazi University Faculty of Medicine, Eskisehir, Turkey), Ener C Dinleyici (Department of Pediatrics, Eskisehir Osmangazi University Faculty of Medicine, Eskisehir, Turkey), Mehmet Ceyhan (Pediatric Infectious Disease Unit, Hacettepe University Faculty of Medicine, Ankara, Turkey), Ugur Bilge (Department of Family Medicine, Eskisehir Osmangazi University Faculty of Medicine, Eskisehir, Turkey), Ilhami Unluoglu (Department of Family Medicine, Eskisehir Osmangazi University Faculty of Medicine, Eskisehir, Turkey)

- Belçika, Hollanda, Almanya'da Türkiye'ye tatile gelen "gurbetçiler"den havalimanına indiklerinde nazofaringeal örnek alındı.
- >350 kişi
- 2 pozitif olgu: 1 olgu SEROGRUP X, diğeri NG

14th Congress of the EMGM, European Meningococcal and Haemophilus Disease Society
September 18-21, 2017 | Prague, Czech Republic
www.emgm2017.cz
EMGM 2017 PRAGUE


Every year,
1.5 million
CHILDREN
DIE
BECAUSE
they weren't
VACCINATED
© UNICEF/NYHQ2012-1667/Noorani
#VACCINESWORK
unicef

MENİNGOKOK AŞILARI



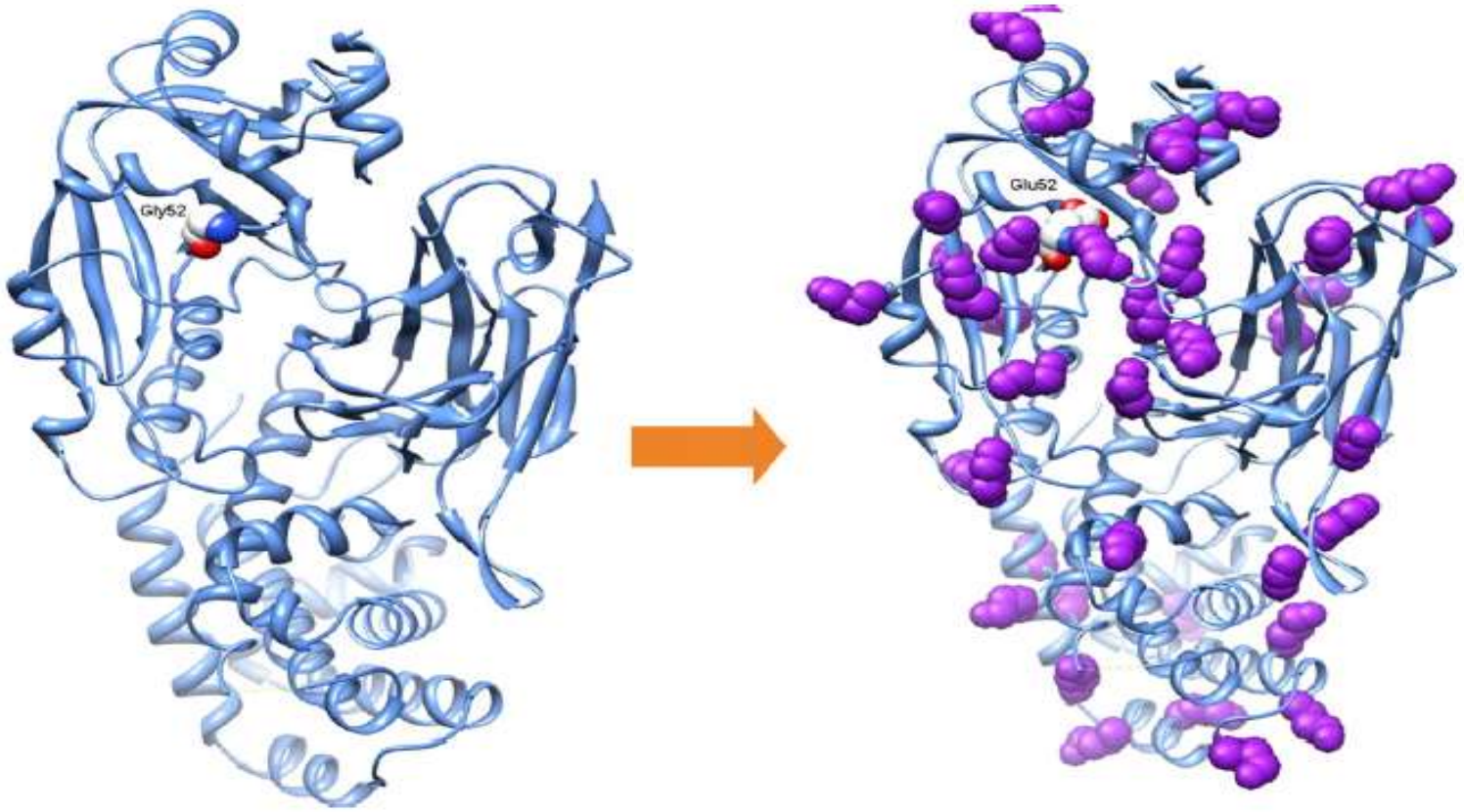
MEN ACWY-CRM

– **MEN ACWY-CRM$_{197}$**

- **MENVEO (GSK®)**
- **10 µg MenA, 5 µg MenC, 5 µg, MenW135, 5 µg MenY**
- **Adjuvan ya da koruyucu içermemektedir.**
- **+2 ile + 8 C'de 36 ay raf ömrü bulunmaktadır.**
- **İntramuskuler uygulanmaktadır.**

MEN ACWY-CRM

– MEN ACWY-CRM$_{197}$



MEN ACWY-CRM

- **MENVEO® Men ACWY-CRM_{197}**
  - CRM_{197}, non toksik mutant bir difteri toksini
    - 52.pozisyondaki glutamik asit rezidüsü yerine glisin
  - Konjuge meningokok aşısı, PCV7 ve PCV13
  - Men ACW-CRM'de oligosakkaritler

  için bir CRM_{197}'e bağlanmak üzere önce hidrolize edilmiş, sonrasında konjugasyon için uygun boyuta getirilmiş, daha sonrasında konjugasyon sağlanmıştır.

Broker et al. Vaccine 2009

MEN ACWY-CRM

- İNFANT DÖNEMİNDE AŞILAMA (2 AY-2 YAŞ)
- ÇOCUKLUK ÇAĞINDA AŞILAMA
- ADÖLESAN VE GENÇ ERİŞKİNLERDE AŞILAMA
- ERİŞKİNLERDE VE YAŞLILARDA AŞILAMA

MEN ACWY-CRM197
İNFANT

ener çağrı dinleyici

JAMA®

Online article and related content current as of April 22, 2010.

Immunogenicity of a Tetravalent Meningococcal Glycoconjugate Vaccine in Infants: A Randomized Controlled Trial

Matthew D. Snape; Kirsten P. Perrett; Karen J. Ford; et al.

JAMA. 2008;299(2):173-184 (doi:10.1001/jama.2007.29-c)

http://jama.ama-assn.org/cgi/content/full/299/2/173

ORIGINAL STUDIES

Immunogenicity and Immune Memory of a Nonadjuvanted Quadrivalent Meningococcal Glycoconjugate Vaccine in Infants

Kirsten P. Perrett, MBBS, Matthew D. Snape, FRCPCH,* Karen J. Ford, RN (Child) BN (Hons), MSc,* Tessa M. John, RN (Child), BSc (Hons), MA,* Ly-Mee M. Yu, MSc,† Joanne M. Langley, MD, MSc,‡ Shelly McNeil, MD,§ Peter M. Dull, MD,¶ Francesca Ceddia, MD,¶ Alessandra Anemona, D.Stat,¶ Scott A. Halperin, MD,‡ Simon Dobson, MD,‖ and Andrew J. Pollard, FRCPCH, PhD**

MEN ACWY-CRM197
İNFANT

ener çağrı dinleyici

ORIGINAL STUDIES

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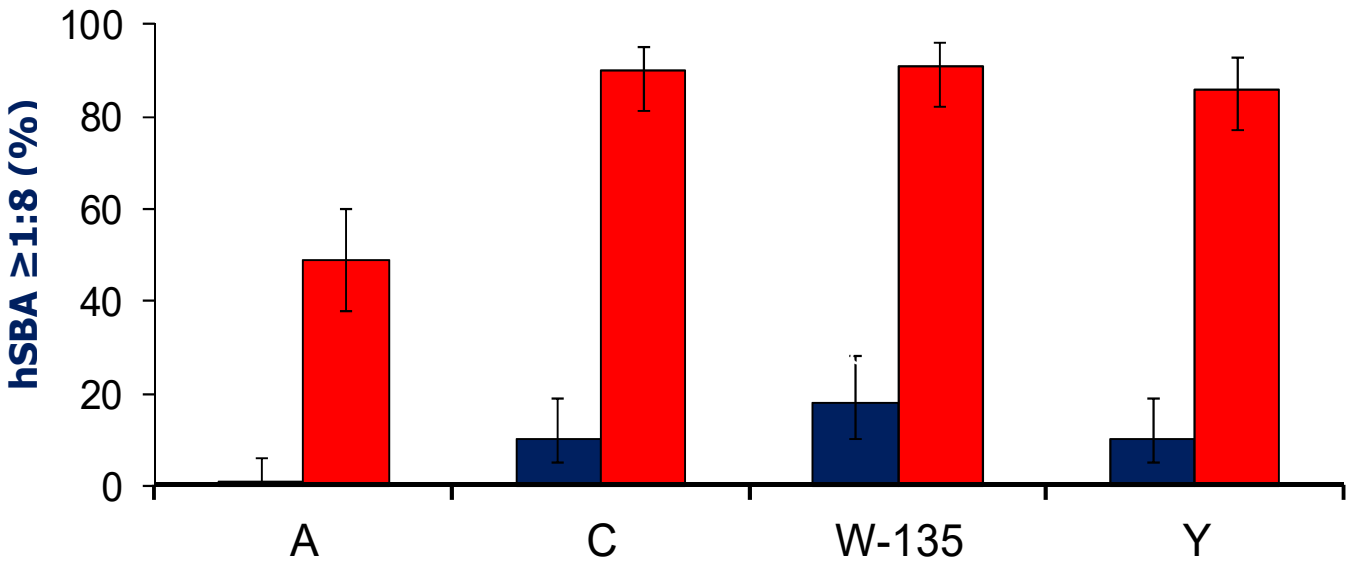


MEN ACWY-CRM197
İNFANT

ener çağrı dinleyici

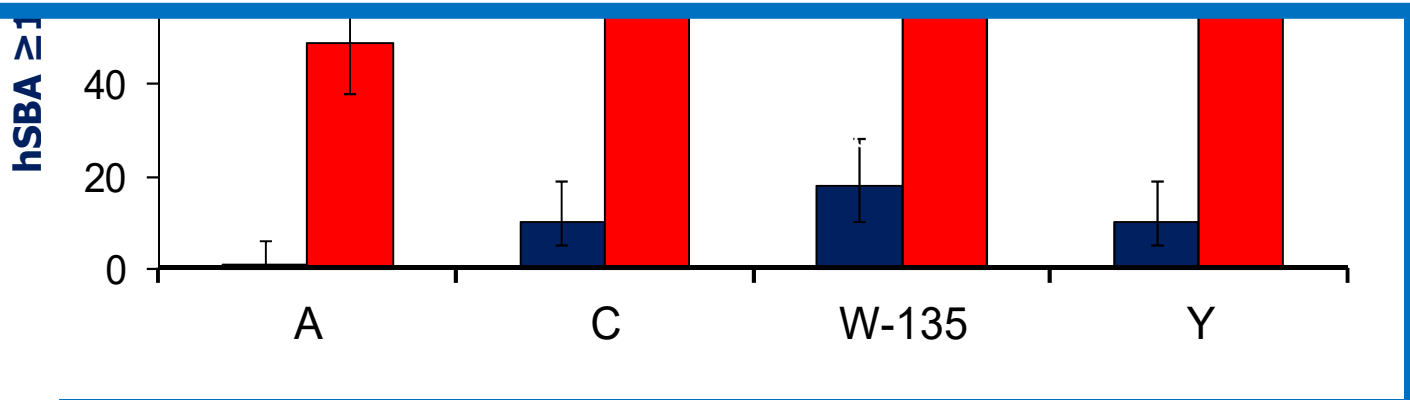
ORIGINAL STUDIES

Immunogenicity and Immune Memory of a Nonadjuvanted Quadrivalent Meningococcal Glycoconjugate Vaccine in Infants

Conclusions: The nonadjuvanted MenACWY-CRM is immunogenic and well tolerated in infancy and could provide broad protection against meningococcal disease in this vulnerable age group.

Key Words: *Neisseria meningitidis*, serogroups A, C, W-135, Y, quadrivalent, glycoconjugatevaccine

(*Pediatr Infect Dis J* 2009;28: 186–193)



MEN ACWY-CRM197
İNFANT

ener çağrı dinleyici

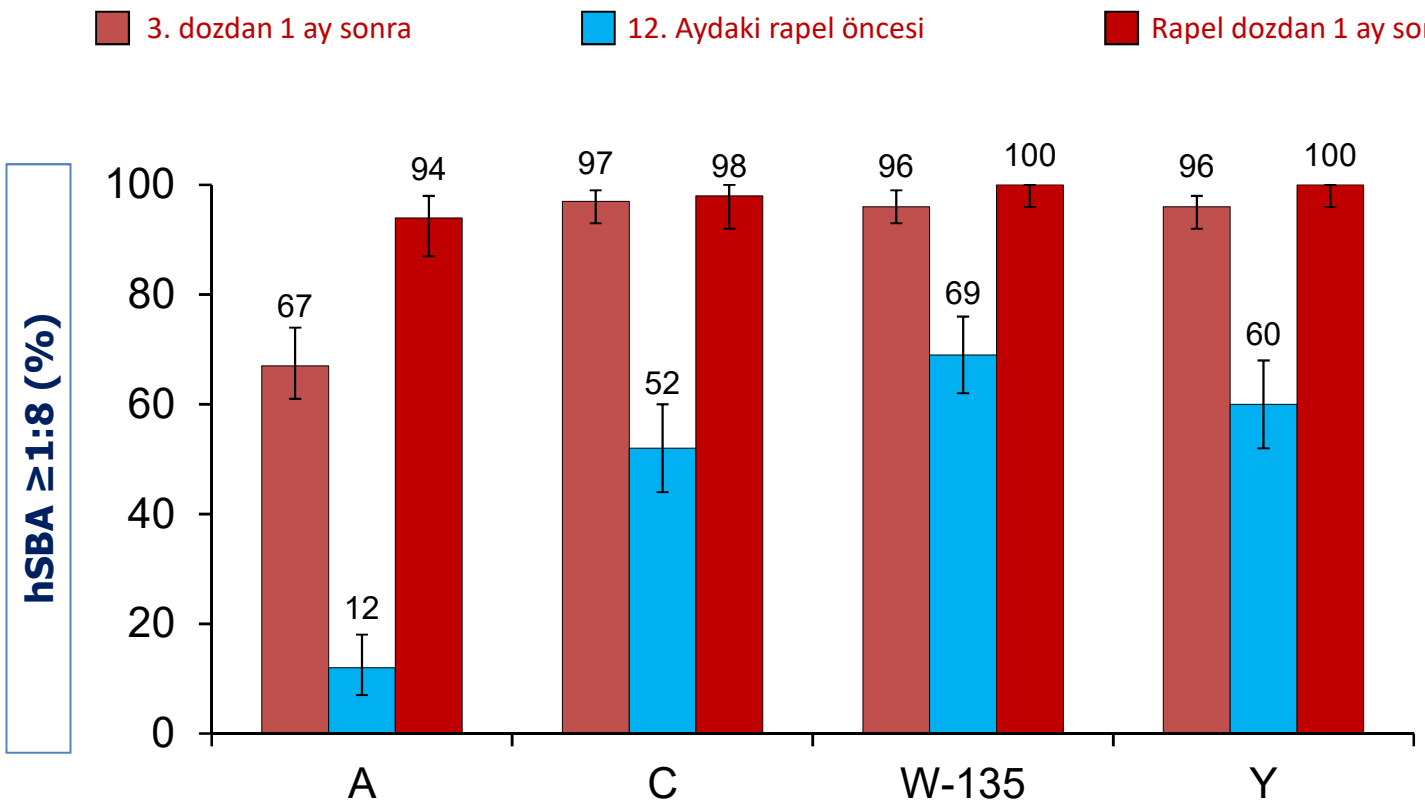
Safety and Immunogenicity of a Novel Quadrivalent Meningococcal CRM-conjugate Vaccine Given Concomitantly With Routine Vaccinations in Infants

Nicola P. Klein, MD, PhD, Keith S. Reisinger, MD,† William Johnston, MD,‡ Tatjana Odrljin, MD,§ Christopher J. Gill, MD,¶ Lisa Bedell, MA,** and Peter Dull, MD§*

Methods: In this open-label phase III study, we randomized full-term 2-month-old infants to 4 doses of MenACWY-CRM coadministered with routine vaccines at 2, 4, 6, and 12 months of age or with routine vaccines alone. We monitored for local and systemic reactions and serious adverse events among all study participants and evaluated for sufficiency of the immune responses to MenACWY-CRM through serum bactericidal activity assay with human complement.

MEN ACWY-CRM197

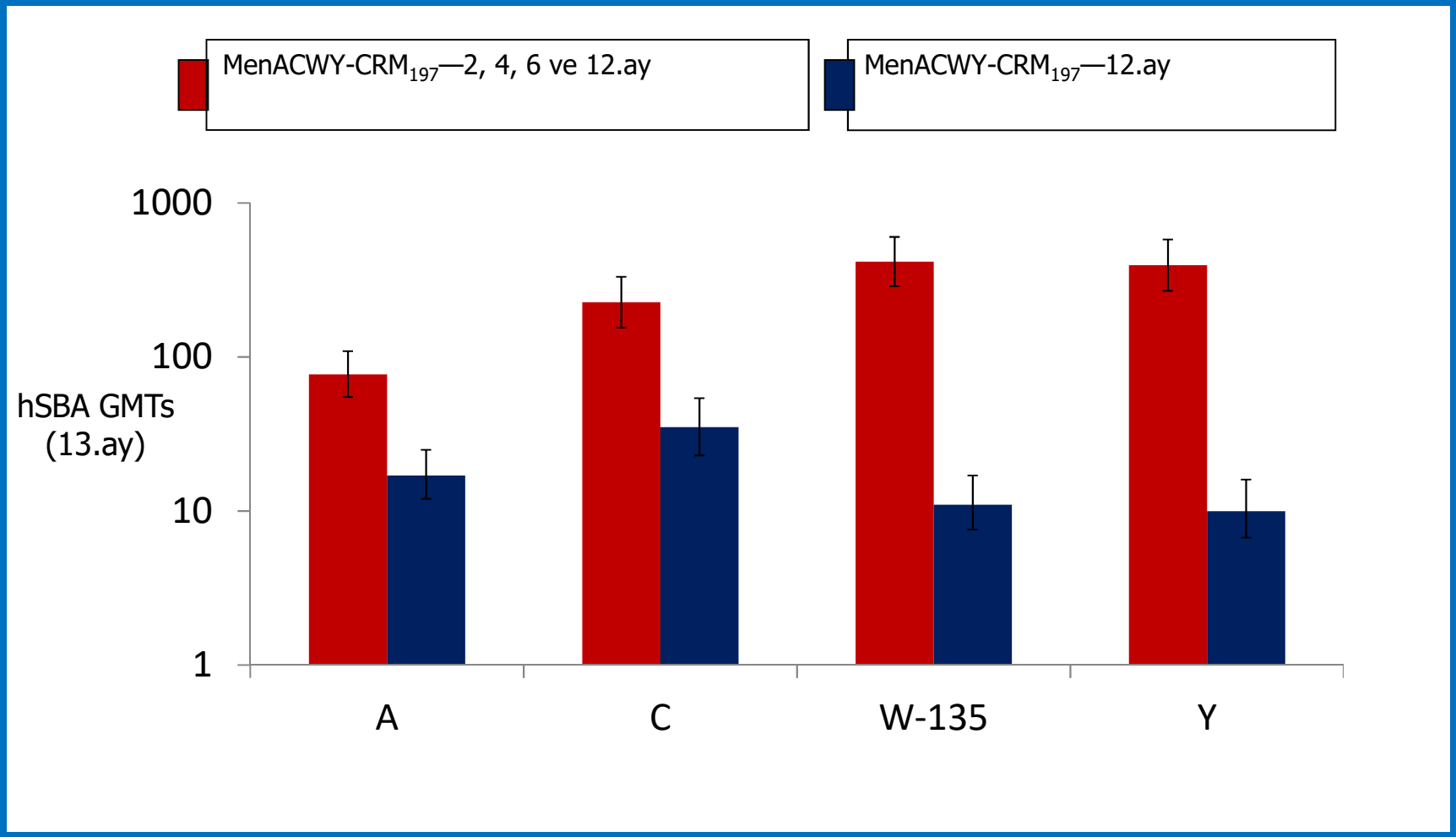
İNFANT 2. 4. 6. ay-12. ay rapel



Klein NP, et al. *Pediatr Infect Dis J.* 2012;31:64-71.

MEN ACWY-CRM197

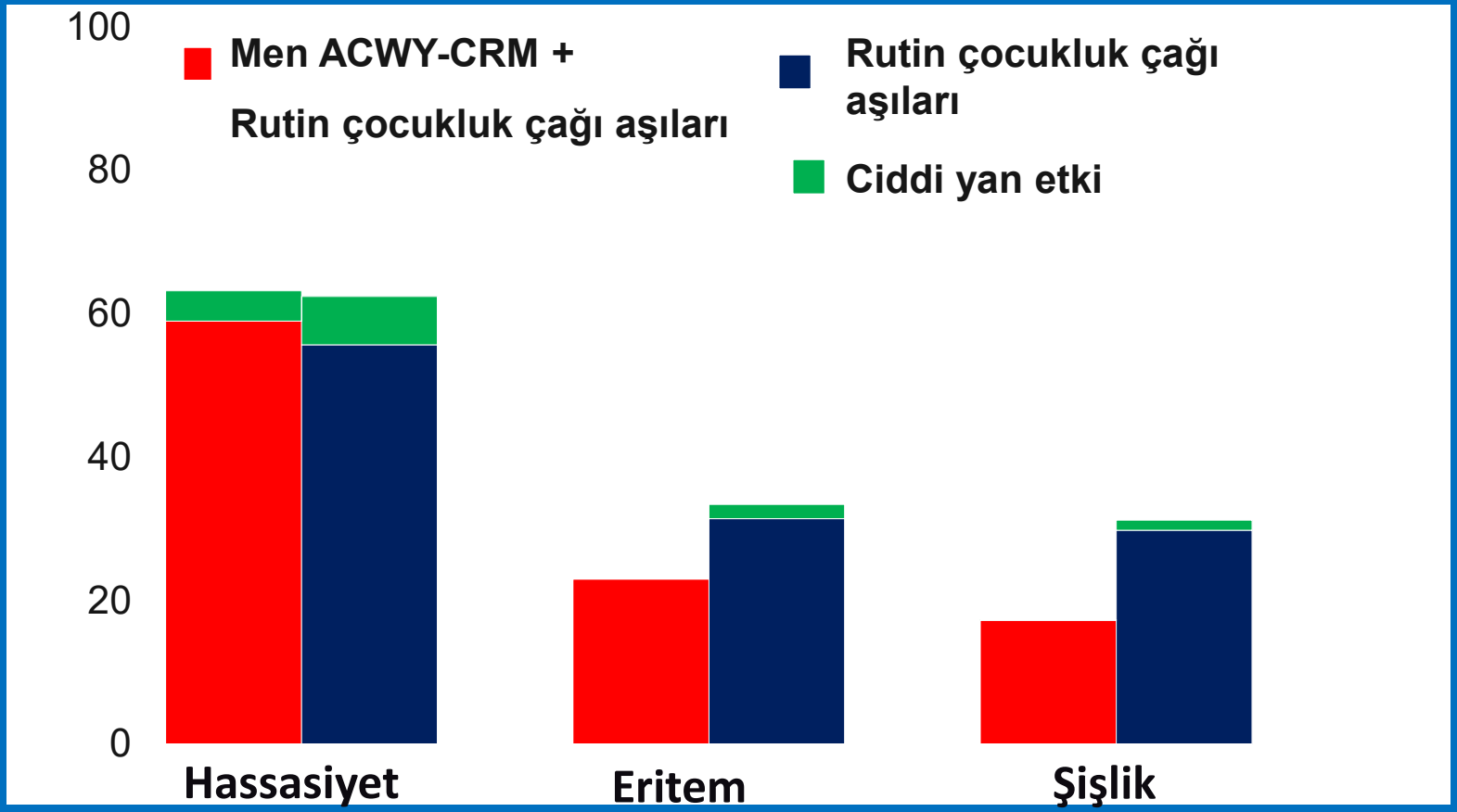
İNFANT 2. 4. 6. ay-12. ay rapel vs. 12.ay



Klein NP, et al. *Pediatr Infect Dis J.* 2012;31:64-71.

MEN ACWY-CRM197

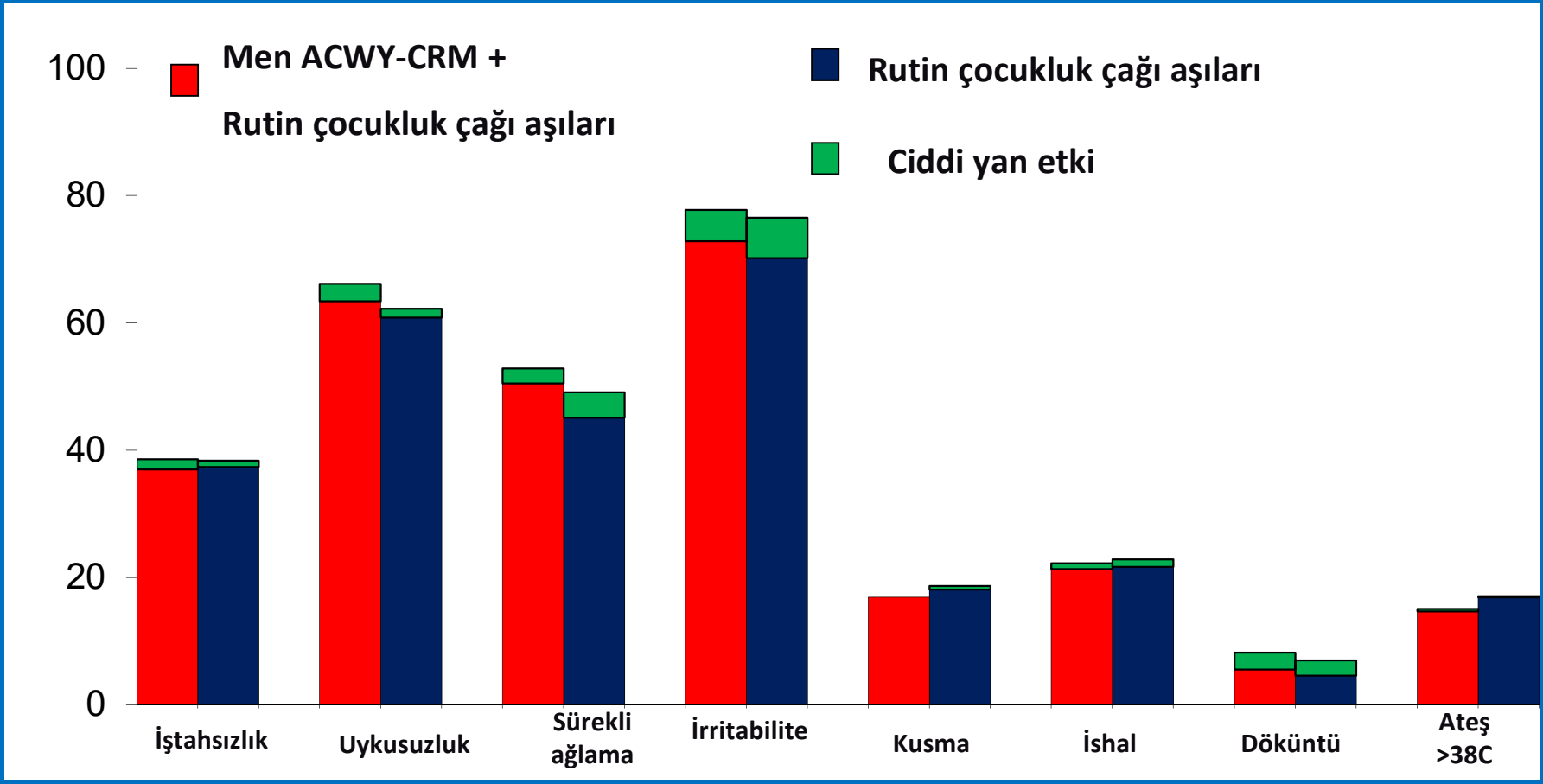
İNFANT 2. 4. 6. ay-12. ay rapel vs. 12.ay



Klein NP, et al. *Pediatr Infect Dis J.* 2012;31:64-71.

MEN ACWY-CRM197

İNFANT 2. 4. 6. ay-12. ay rapel vs. 12.ay



Klein NP, et al. *Pediatr Infect Dis J.* 2012;31:64-71.

MEN ACWY-CRM197
İNFANT

- Farklı aşı şemalarında yan etki profili diğer rutin aşılar ile benzer
  - 2.4.6, 12.ay; 2.4.6, 16.ay, 2.4. ve 12.ay
- 12. ayda MMRV ile birlikte uygulamada iyi tolere edilmiş.
- PCV7 ile yapılan çalışmalarda hem meningokok serogrupları için hem de pnömokok serotipleri için immunojenik yanıt etkilenmemiş, reaktojenisitede artış gözlenmemiştir.

Klein NP, et al. *Pediatr Infect Dis J*. 2012;31:64-71; Tregnaghi M, et al. ESPID Annual Meeting; June 7-11, 2011; The Hague; Klein NP, et al. *Vaccine*. 2012;30:3929-3936.

MEN ACWY-CRM197
İNFANT

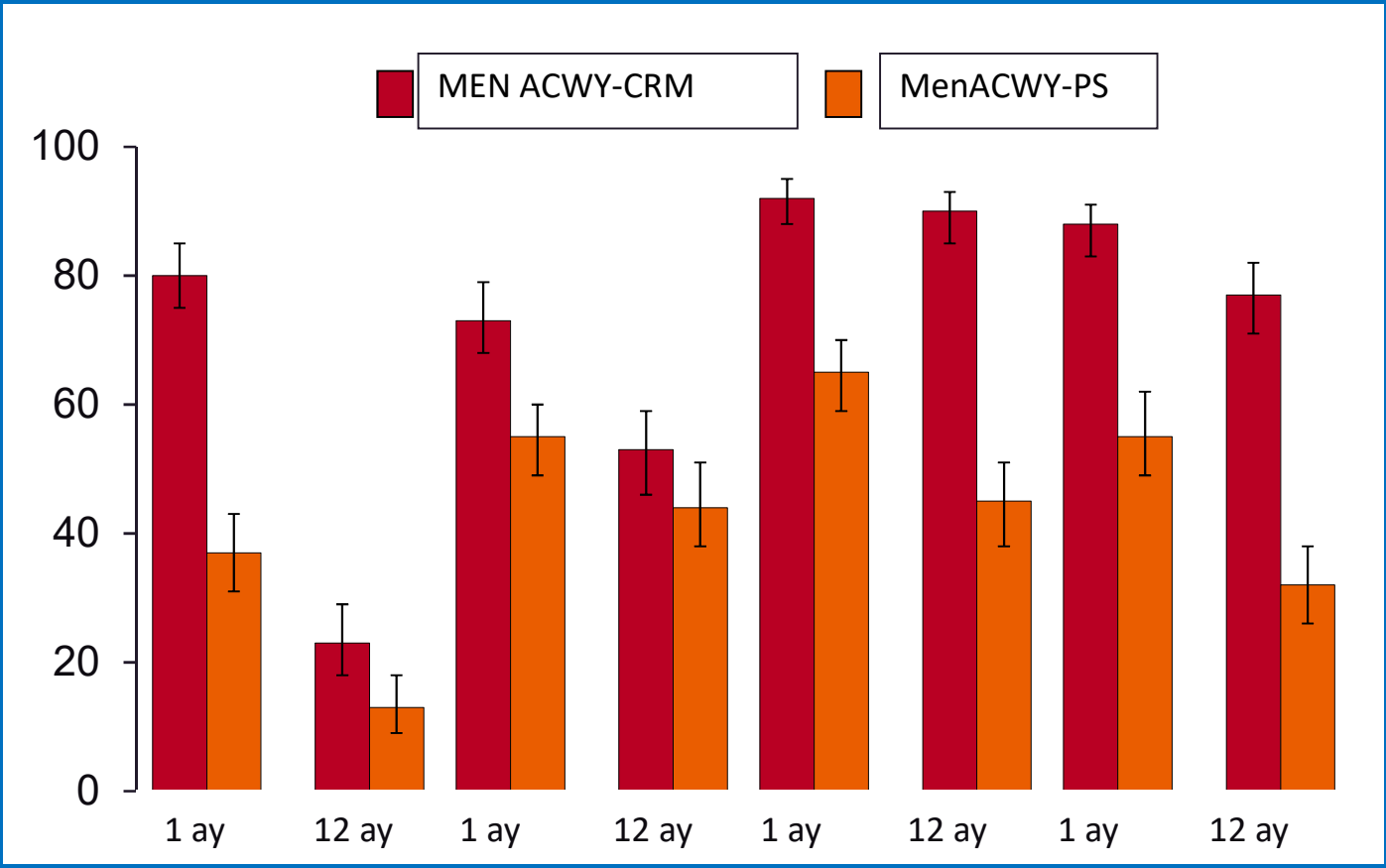
- 3 Faz 3 çalışma sonuçları
- MenACWY-CRM ve rutin 2-24 ay aşıları
  - (DTaP-HBV-IPV, +HIB or DTP-HIB-IPV+HBV, +Rotavirus, +PCV7 or PCV13, +MMR/MMRV)
- **12.818 çocuk**
  - Amerika, Avustralya, Kanada, Tayvan, Latin Amerika
- 3 + 1 doz şemasından 1 ay sonra hSBA titresi ≥8 olan olgu yüzdesi serogrup A için %89-95, C için %95-98, W135 için %97-100, Y için %96-100
  - Latin Amerika'da 2,4,6, 16.ay, diğer ülkelerde 2,4, 12 ay)
- Birlikte uygulandığı aşıların immün yanıtı üzerine olumsuz etkisi yok.
- İyi tolere edilmiş ve yan etki profili kabul edilebilir düzeyde

Smolenov I et al. International Pathogenic Neisseria Conference 2012..

MEN ACWY-CRM197

2-10 YAŞ

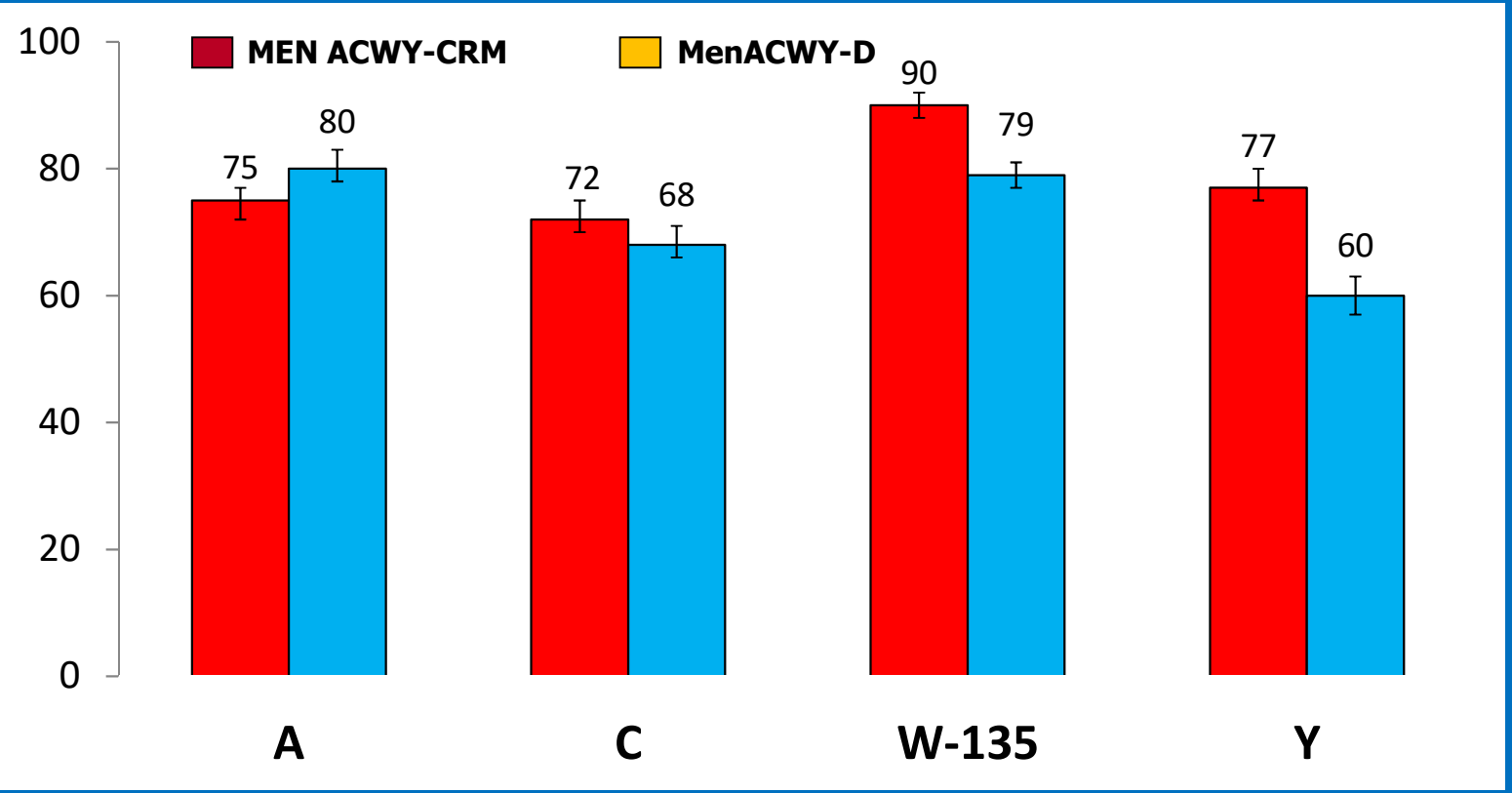
2-10 YAŞ ARASI ÇOCUKLARDA TEK DOZ SONRASI 1. VE 12.AYDA HSBA >1:8 OLAN OLGU YÜZDESİ MENACWY-CRM GRUBUNDA POLİSAKARİT AŞIYA GÖRE DAHA YÜKSEK OLARAK SAPTANMIŞTIR.



Black S, et al. *Vaccine*. 2010;28:657-663;

MEN ACWY-CRM197
2-10 YAŞ

2-10 YAŞ ARASI ÇOCUKLARDA TEK DOZ SONRASI HSBA >1:8 OLAN OLGU YÜZDESİ MENACWY-CRM VE MEN ACWY-D KARŞILAŞTIRMASI



Halperin SA, et al. *Vaccine*. 2010;28:7865–7872

MEN ACWY-CRM197
2-10 YAŞ

Vaccine 28 (2010) 657–663

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Immunogenicity and tolerability of a quadrivalent meningococcal glycoconjugate vaccine in children 2–10 years of age

S. Black[a,*], N.P. Klein[b], J. Shah[c], L. Bedell[c], A. Karsten[d], P.M. Dull[c]

Vaccine 28 (2010) 7865–7872

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Comparison of the safety and immunogenicity of an investigational and a licensed quadrivalent meningococcal conjugate vaccine in children 2–10 years of age

Scott A. Halperin[a,*,1], Anil Gupta[b,1], Robert Jeanfreau[c,1], Nicola P. Klein[d,1], Keith Reisinger[e,1], Emmanuel Walter[f,1], Lisa Bedell[g,1], Christopher Gill[g,1], Peter M. Dull[g,1]

MEN ACWY-CRM197
2-10 YAŞ

ener çağrı dinleyici

Table 3
Percentage of children experiencing local and/or systemic reactions.

	MenACWY-CRM	MPSV4	
Subjects (2–10-year-olds) experiencing local reactions (severe reactions), %	*n* = 308	*n* = 310	*P*
Pain			
Ery			
Ind			
Subjects experiencing systemic reactions (severe reactions), %			
Irritability	19(0)	17(0)	
Sleepiness	17(1)	16(1)	
Anorexia	12(0)	11(0)	
Vo			
Dia			
Art			
He			
Fev			
Analg			
	6–10-year-olds		
	n = 157	*n* = 157	
Headache	19(2)	11(1)	
Malaise	8(2)	6(1)	
Chills	8(1)	3(1)	
Myalgia	8(2)	3(1)	
Nausea	4(0)	4(1)	
Arthralgia	3(1)	2(0)	
Fever, oral temp. ≥38 °C (≥40 °C)	2(0)	2(0)	
Analgesic/antipyretic use	23	15	

MenACWY-CRM, investigational quadrivalent meningococcal CRM_{197}-conjugated vaccine; MPSV4, quadrivalent meningococcal polysaccharide vaccine.

MEN ACWY-CRM ile MPSV4 KARŞILAŞTIRMASINDA, MEN ACWY-CRM İYİ TOLERE EDİLMİŞ, LOKAL VE SİSTEMİK YAN ETKİLER KABUL EDİLEBİLİR DÜZEYDEDİR.

MEN ACWY-CRM ile MEN ACWY-D KARŞILAŞTIRMASINDA, MEN ACWY-CRM İYİ TOLERE EDİLMİŞ, LOKAL VE SİSTEMİK YAN ETKİLER KABUL EDİLEBİLİR DÜZEYDEDİR.

Table 3b
Percent (95% confidence interval) of 6–10-year-olds with solicited reactions by vaccine group.

Induration	13 (10–16)	17 (14–20)
Pain	45 (41–49)[a]	39 (35–43)
Systemic reactions		
Arthralgia	4 (3–6)	6 (5–9)
Headache	13 (11–17)	18 (15–21)[a]
Rash	3 (2–5)	5 (3–7)
Fever ≥38 °C	2 (1–3)	2 (1–4)

Percentages are based on numbers of children for whom diary card data were available.

[a] $p < 0.05$ vs. comparator; no other statistically significant differences were observed.

MEN ACWY-CRM197
2-10 YAŞ 5 YIL SONRA??

Vaccine. 2015 Apr 27;33(18):2175-82. doi: 10.1016/j.vaccine.2015.02.049. Epub 2015 Mar 2.

Antibody persistence 5 years after vaccination at 2 to 10 years of age with Quadrivalent MenACWY-CRM conjugate vaccine, and responses to a booster vaccination.

Block SL[1], Christensen S[2], Verma B[3], Xie F[3], Keshavan P[4], Dull PM[3], Smolenov I[4].

⊕ Author information

Abstract

BACKGROUND: In a multi-center extension study, children 2-10 years of age, initially vaccinated with one or two doses (2-5 year-olds) or one dose (6-10 year-olds) of quadrivalent meningococcal CRM197-conjugate vaccine (MenACWY-CRM), were assessed five years later for antibody persistence and booster response using serum bactericidal assay with human complement (hSBA).

METHODS: Children 7-10 and 11-15 years of age, who received MenACWY-CRM in the original study, and age-matched vaccine-naïve children, were enrolled in this extension study. After an initial blood draw, children received one dose of MenACWY-CRM as booster or primary dose, with a second blood draw 28 days later.

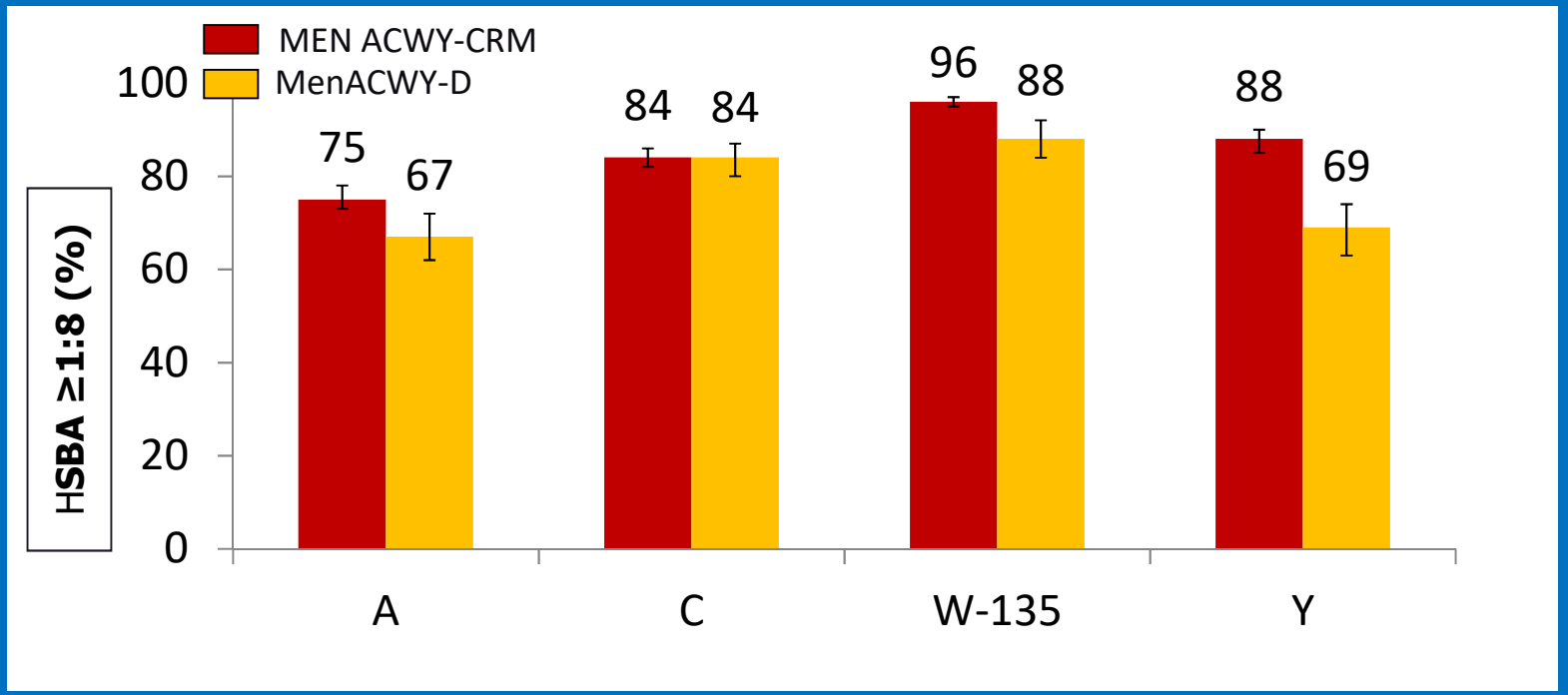
RESULTS: hSBA titers decreased five years after primary vaccination, but were higher than in non-vaccinated controls against serogroups C, W and Y, with substantial proportions having titers ≥8: 7-22% for A, 32-57% for C, 74-83% for W, and 48-54% for Y. Previously-vaccinated children demonstrated booster responses to revaccination against all four serogroups. Responses to primary vaccination in vaccine-naïve controls were lower and similar to primary responses observed in the original study. All vaccinations were generally well tolerated, with no safety concern raised.

CONCLUSIONS: Approximately half the children vaccinated as 2-10 year-olds maintained protective antibodies against serogroups C, W and Y five years later, but fewer did against serogroup A. Declining titers five years after vaccination and robust booster responses suggest that five years may be an appropriate interval to revaccinate children, subject to epidemiology and delivery considerations.

MEN ACWY-CRM197
ADÖLESAN

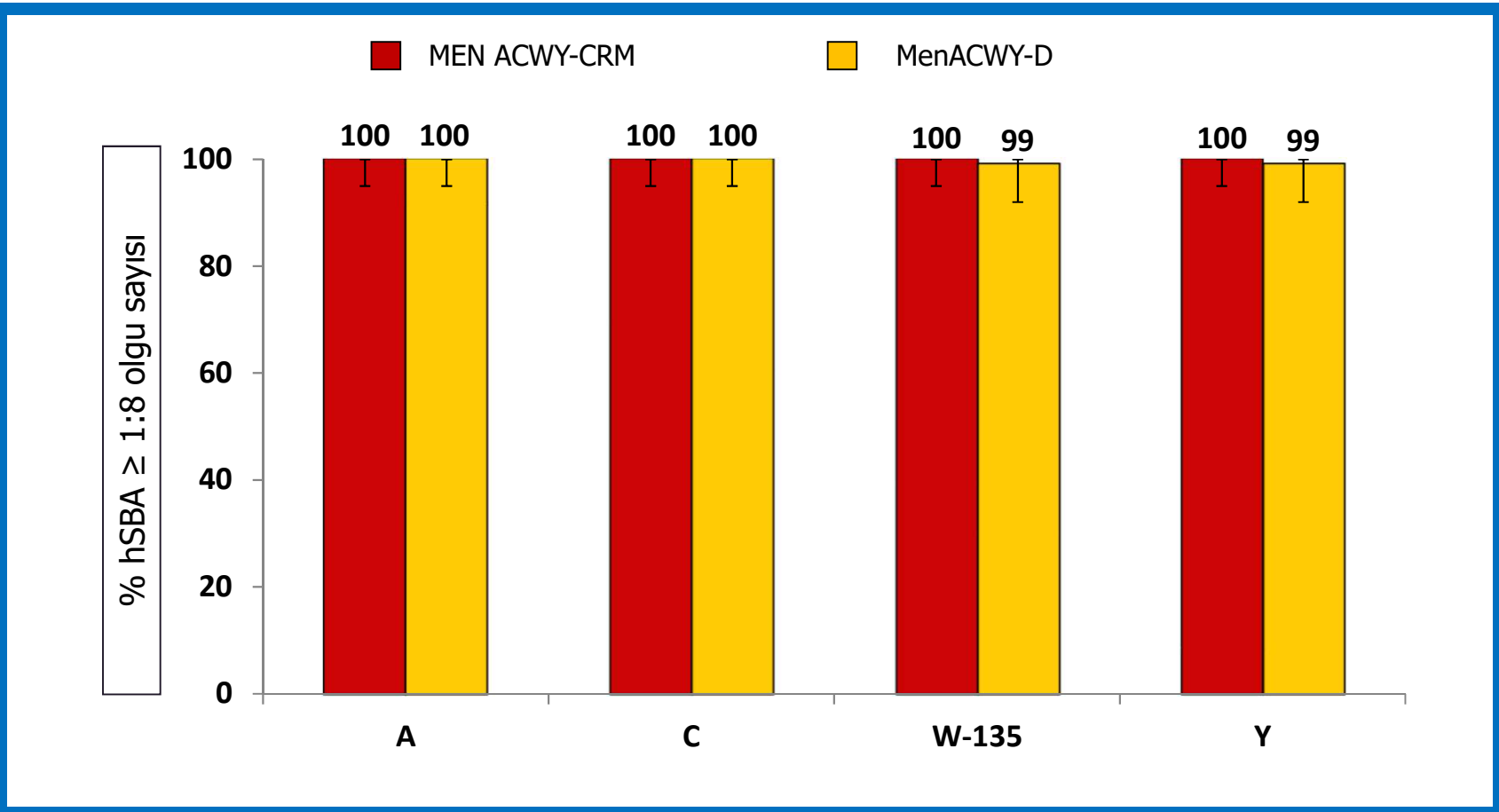
A Randomized Trial to Determine the Tolerability and Immunogenicity of a Quadrivalent Meningococcal Glycoconjugate Vaccine in Healthy Adolescents

Lisa A. Jackson, MD, MPH, Robert M. Jacobson, MD,† Keith S. Reisinger, MD, MPH,‡ Alessandra Anemona, DStat,§ Lisa E. Danzig, MD,§ and Peter M. Dull, MD§*



MEN ACWY-CRM197
ADÖLESAN

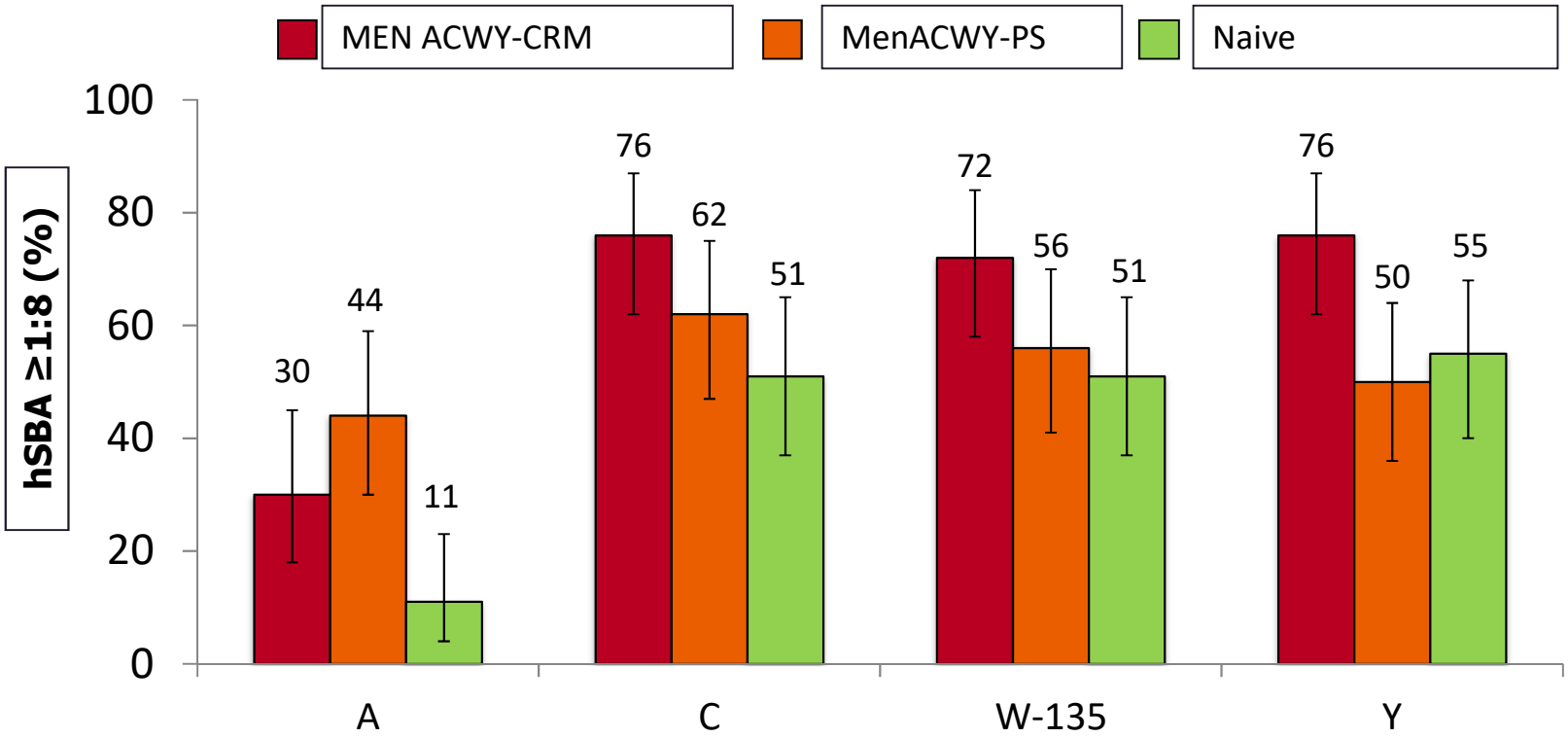
11-18 yaş arasında aşılamanın **3**. yılında tek doz rapel sonrası hSBA>1:8(%); MENACWY-CRM vs. MENACWY-D



Centers for Disease Control and Prevention (CDC). *MMWR Morb Mortal Wkly Rep*. 2011;60:1018-1019.

MEN ACWY-CRM197
ADÖLESAN

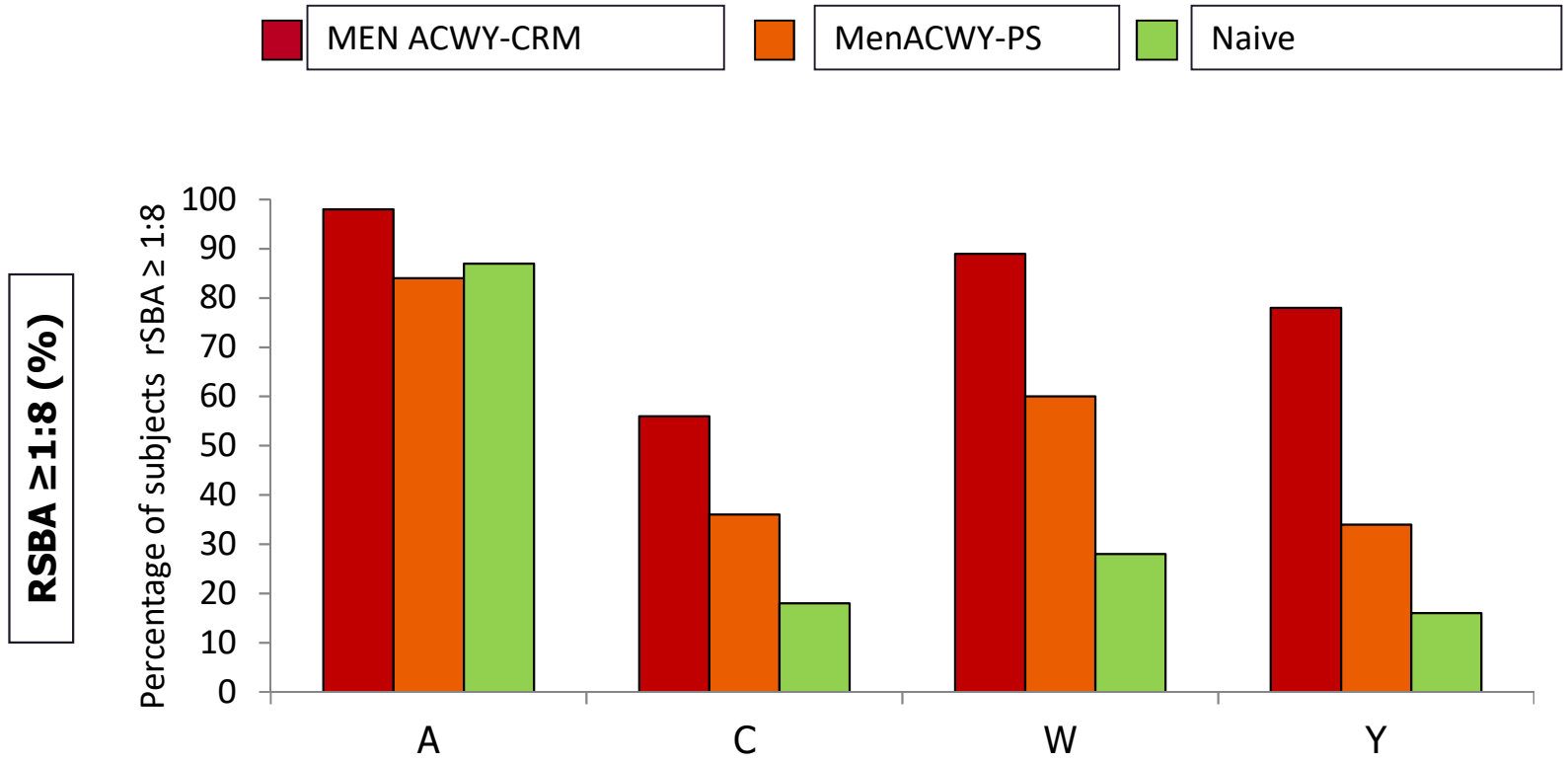
Aşılamanın **5**. yılı, hSBA >1:8(%); 11-17 YAŞ MENACWY-CRM vs. MPSV4



Jacobson RM, et al. *Pediatr Infect Dis J*. 2013;32:e170-177.

MEN ACWY-CRM197
ADÖLESAN

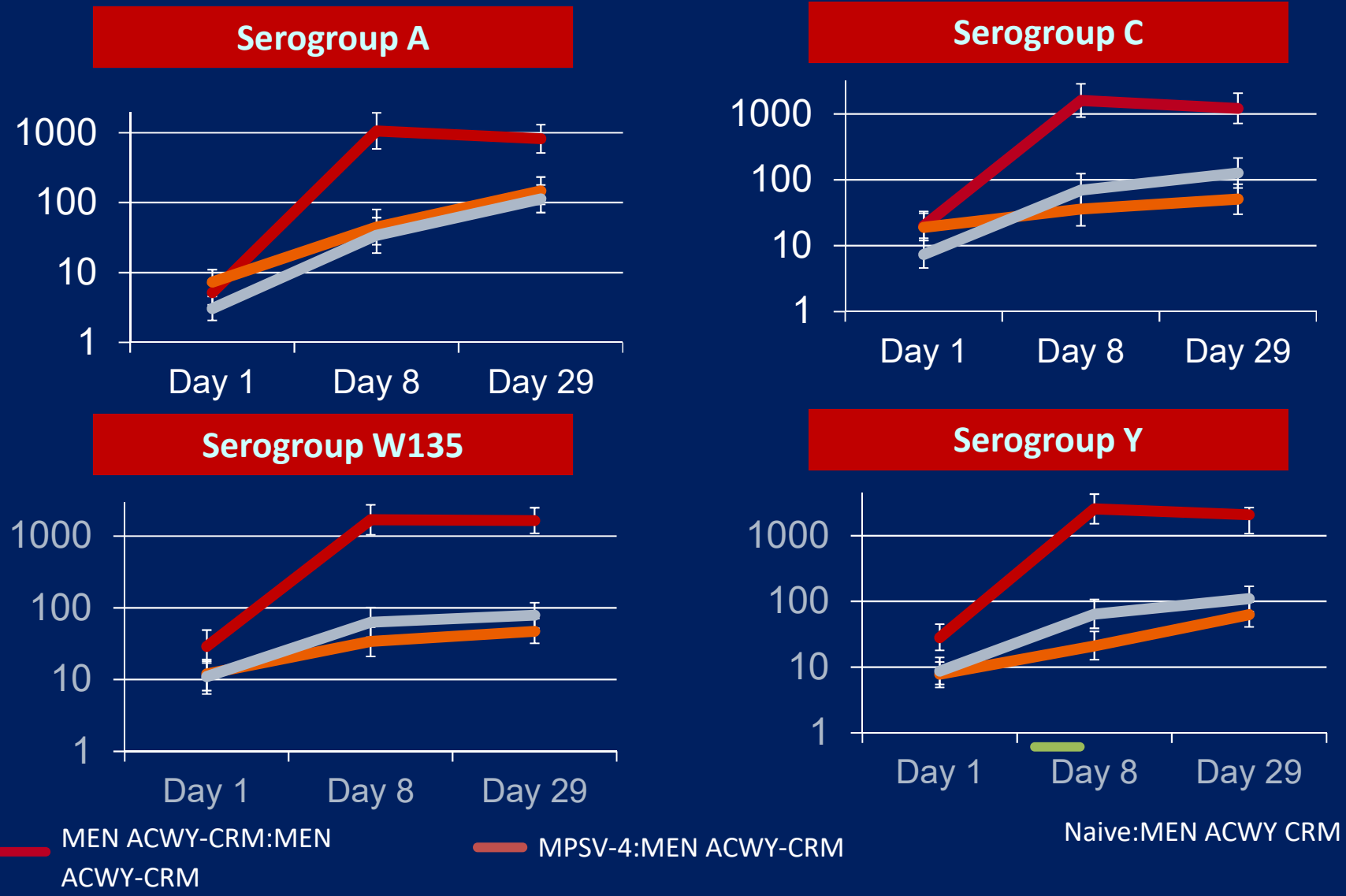
Aşılamanın **5**. yılı, rSBA >1:8(%); 11-17 YAŞ MENACWY-CRM vs. MPSV4



Jacobson RM, et al. *Pediatr Infect Dis J*. 2013;32:e170-177.

MEN ACWY-CRM197

ADÖLESAN 5. YIL BOOSTER Jacobson PIDJ 2013



MEN ACWY-CRM197
ADÖLESAN

ener çağrı dinleyici

SHORT REPORT

Human Vaccines 6:11, 881-887; November 2010; © 2010 Landes Bioscience

Persistence of immune responses after a single dose of Novartis meningococcal serogroup A, C, W-135 and Y CRM-197 conjugate vaccine (Menveo®) or Menactra® among healthy adolescents

Christopher J. Gill,[1,*] Roger Baxter,[2] Alessandra Anemona,[1] Giuseppe L. Ciavarro[1] and Peter M. Dull[1]

MEN ACWY-CRM197
ADÖLESAN

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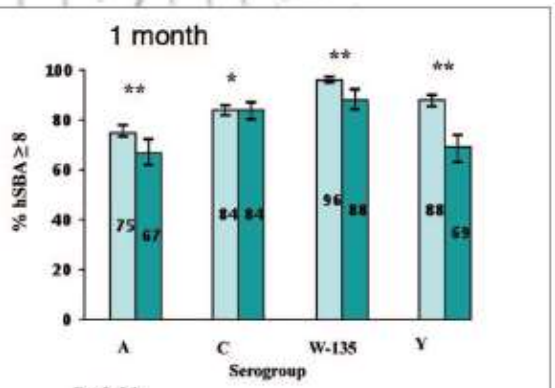
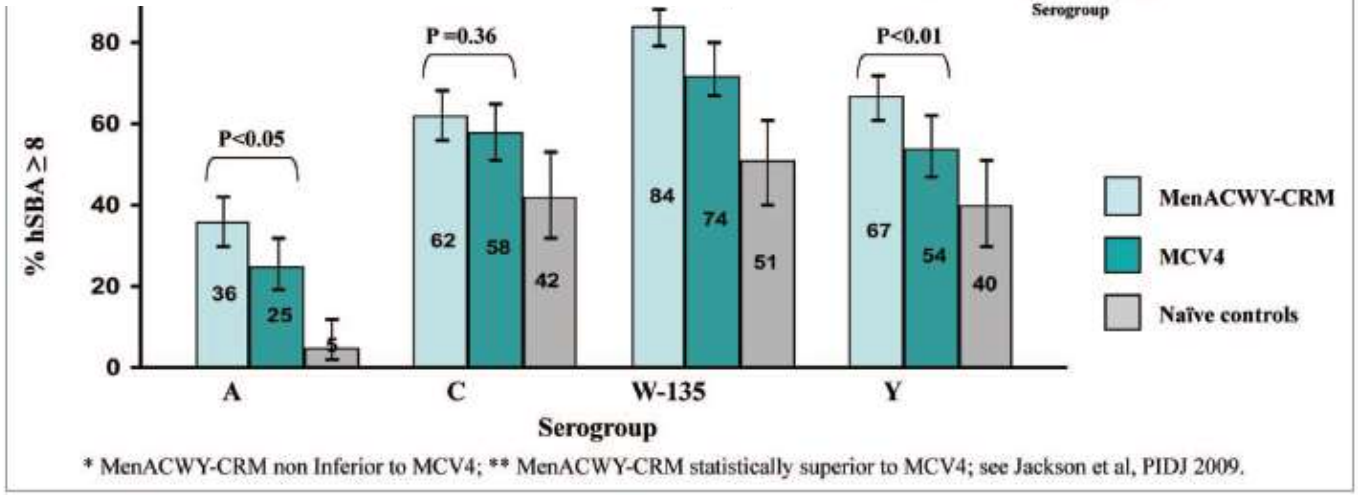
In summary, recipients of the MenACWY-CRM was immunogenic at the post-primary (1 month) and demonstrated strong persistence at a median of 22 months post vaccination, and led to a statistically higher proportion of subjects with hSBA titers ≥8 for serogroups A, W-135 and Y than did MCV4. Given that hSBA titers have been correlated with protection against invasive meningococcal disease due to serogroup C,[5,16] these results may infer a potential advantage of the MenACWY-CRM vaccine over time, and may be relevant in determining the need for,

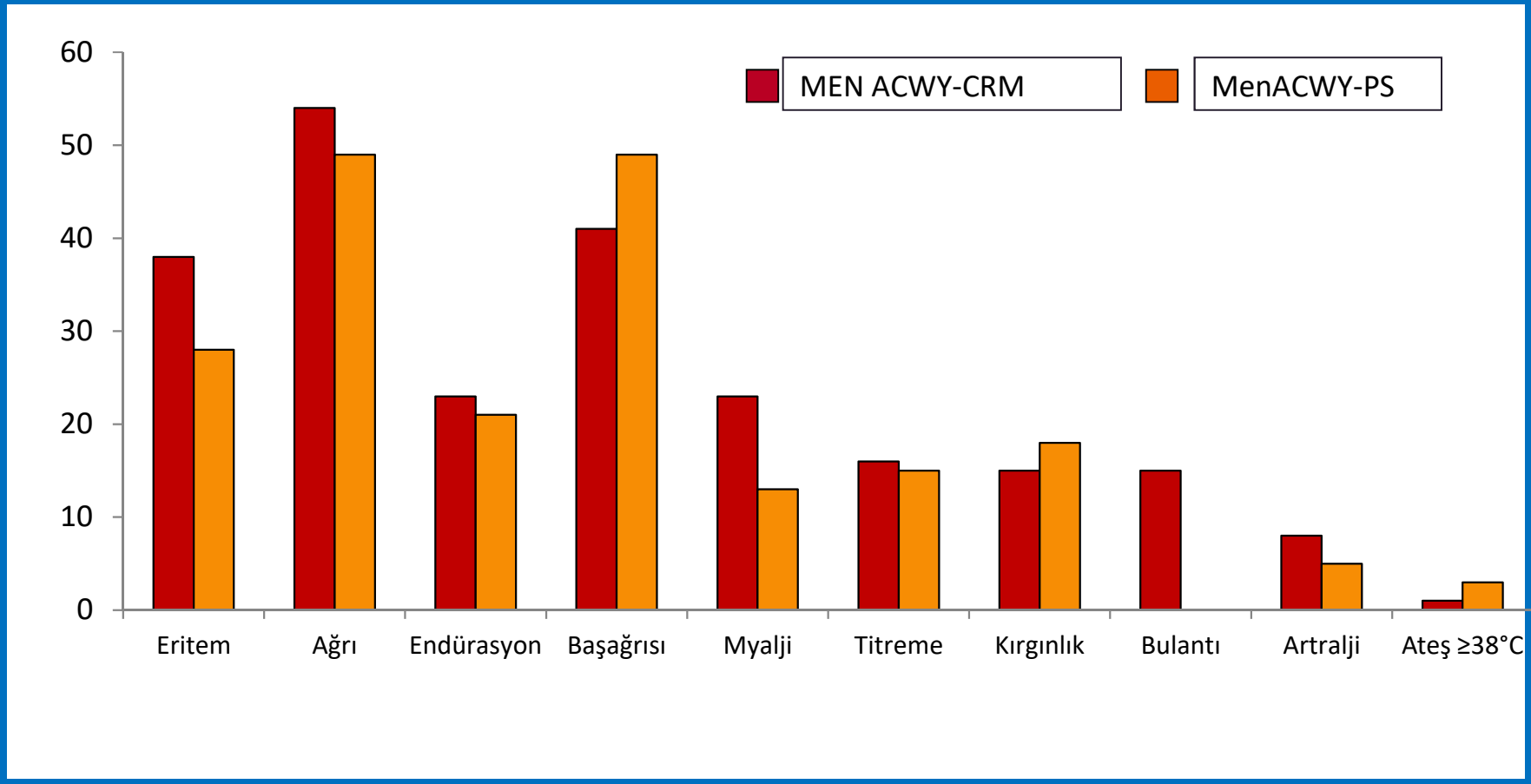




* MenACWY-CRM non Inferior to MCV4; ** MenACWY-CRM statistically superior to MCV4; see Jackson et al, PIDJ 2009.

MEN ACWY-CRM197
ADÖLESAN

Yan etki profili yönünden MenACWY-CRM ile polisakarit aşı benzer bulunmuştur.



Jackson LA, et al. *Pediatr Infect Dis J*. 2009;28:86-91.

MEN ACWY-CRM197
ADÖLESAN

11-17 YAŞ ARASINDA MEN ACWY-CRM ile MPSV4 KARŞILAŞTIRMASINDA, MEN ACWY-CRM İYİ TOLERE EDİLMİŞ, LOKAL VE SİSTEMİK YAN ETKİLER KABUL EDİLEBİLİR DÜZEYDEDİR.

Jackson LA, et al. *Pediatr Infect Dis J*. 2009;28:86-91.

11-17 YAŞ ARASINDA MEN ACWY-CRM ile MEN ACWY-D KARŞILAŞTIRMASINDA, MEN ACWY-CRM İYİ TOLERE EDİLMİŞ, LOKAL VE SİSTEMİK YAN ETKİLER KABUL MEN ACWY-D İLE BENZERDİR

Jackson LA, et al. *Clin Infect Dis*. 2009;49:e1-e10.

MEN ACWY-CRM197
ADÖLESAN

ener çağrı dinleyici

MENACWY-CRM İLE HPV VE TDAP BİRLİKTE UYGULAMASI

Vaccine 28 (2010) 3171–3179

Contents lists available at ScienceDirect

Vaccine

journal homepage: www.elsevier.com/locate/vaccine

Safety and immunogenicity of one dose of MenACWY-CRM, an investigational quadrivalent meningococcal glycoconjugate vaccine, when administered to adolescents concomitantly or sequentially with Tdap and HPV vaccines☆

A. Arguedas[a,*], C. Soley[a], C. Loaiza[a], G. Rincon[a], S. Guevara[a], A. Perez[a], W. Porras[a], O. Alvarado[a], L. Aguilar[a], A. Abdelnour[a], U. Grunwald[b], L. Bedell[c], A. Anemona[c,d], P.M. Dull[c]

MEN ACWY-CRM197
ADÖLESAN

MenACWY-CRM ile HPV ve TDAP birlikte uygulamada antikor yanıtında değişme olmamış, yan etki profili ayrı ayrı uygulama ile benzer olarak bulunmuş.

Vaccine 28 (2010) 3171–3179

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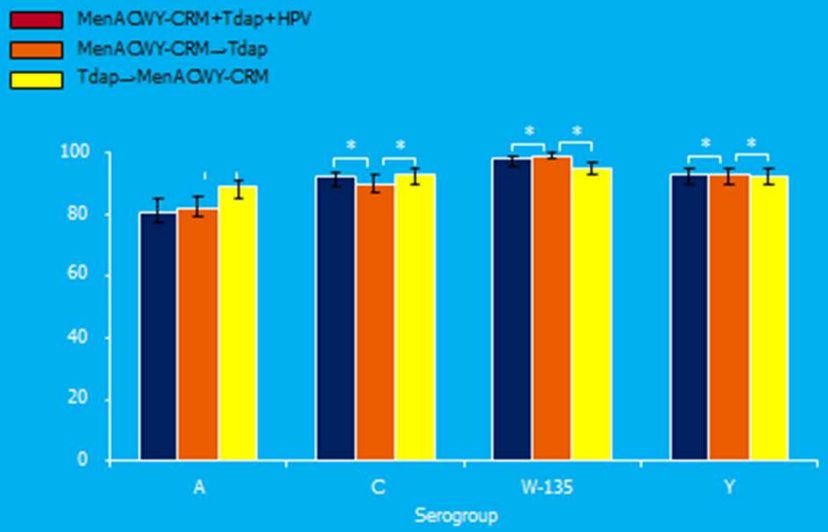
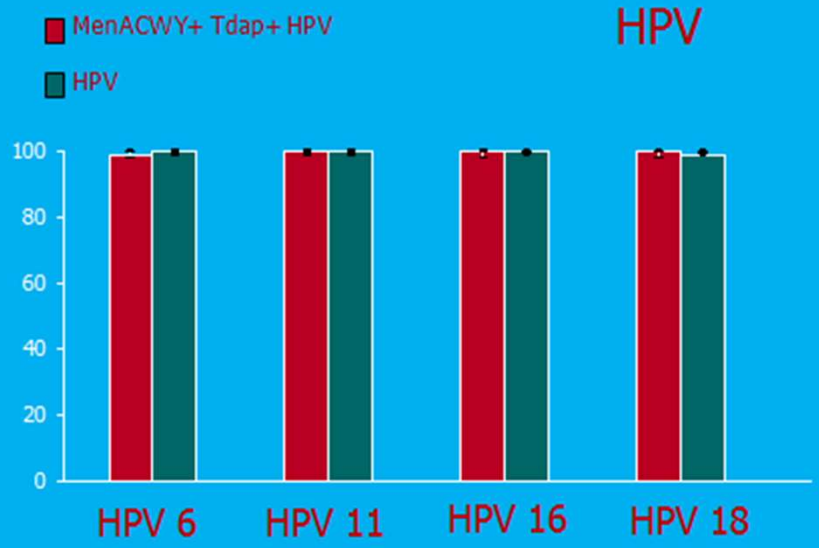
MEN ACWY-CRM197
ADÖLESAN



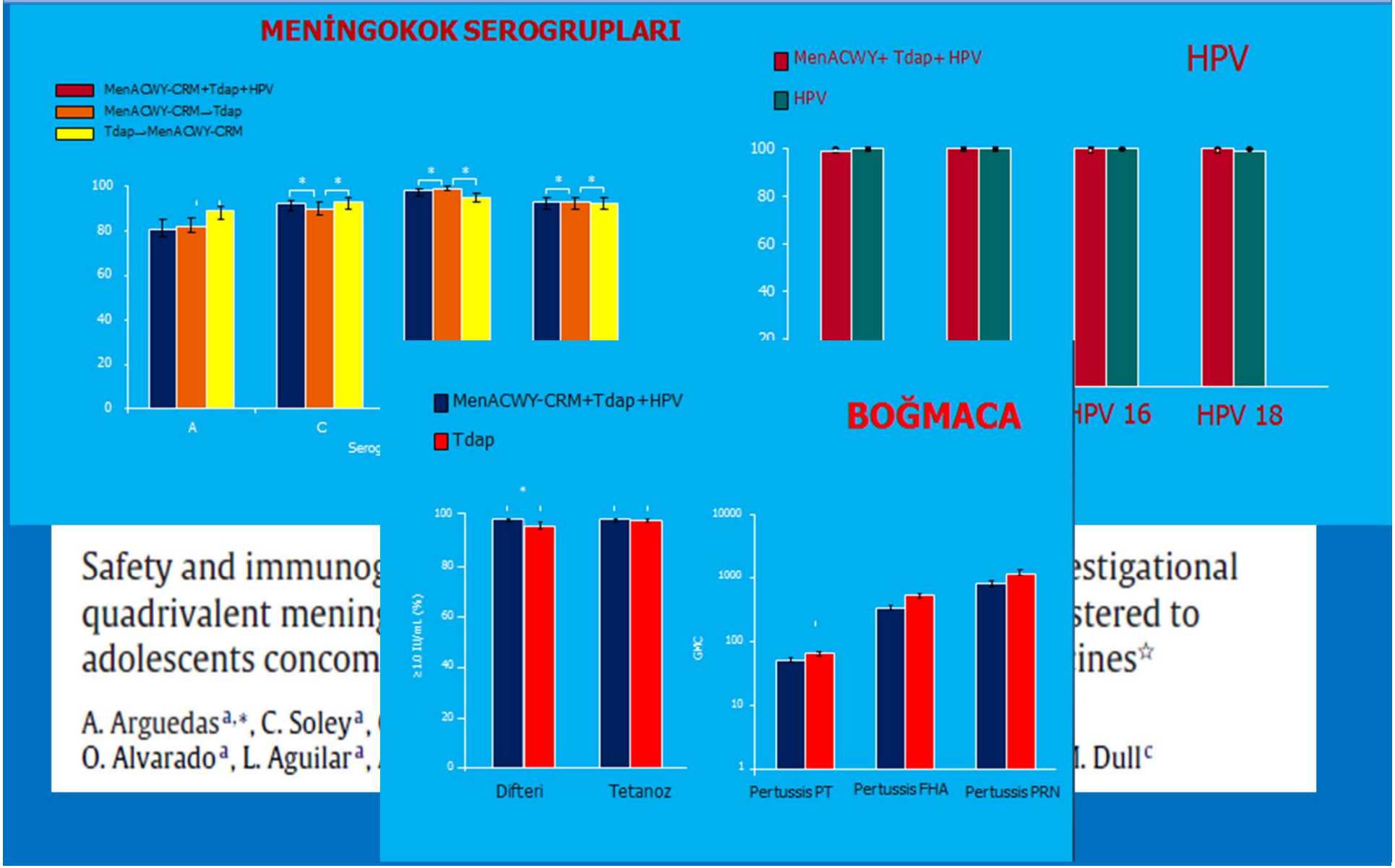


Safety and immunogenicity of one dose of MenACWY-CRM, an investigational quadrivalent meningococcal glycoconjugate vaccine, when administered to adolescents concomitantly or sequentially with Tdap and HPV vaccines☆

A. Arguedas[a,*], C. Soley[a], C. Loaiza[a], G. Rincon[a], S. Guevara[a], A. Perez[a], W. Porras[a], O. Alvarado[a], L. Aguilar[a], A. Abdelnour[a], U. Grunwald[b], L. Bedell[c], A. Anemona[c,d], P.M. Dull[c]

MEN ACWY-CRM197
ADÖLESAN

ener çağrı dinleyici



Safety and immunog
quadrivalent mening
adolescents concom

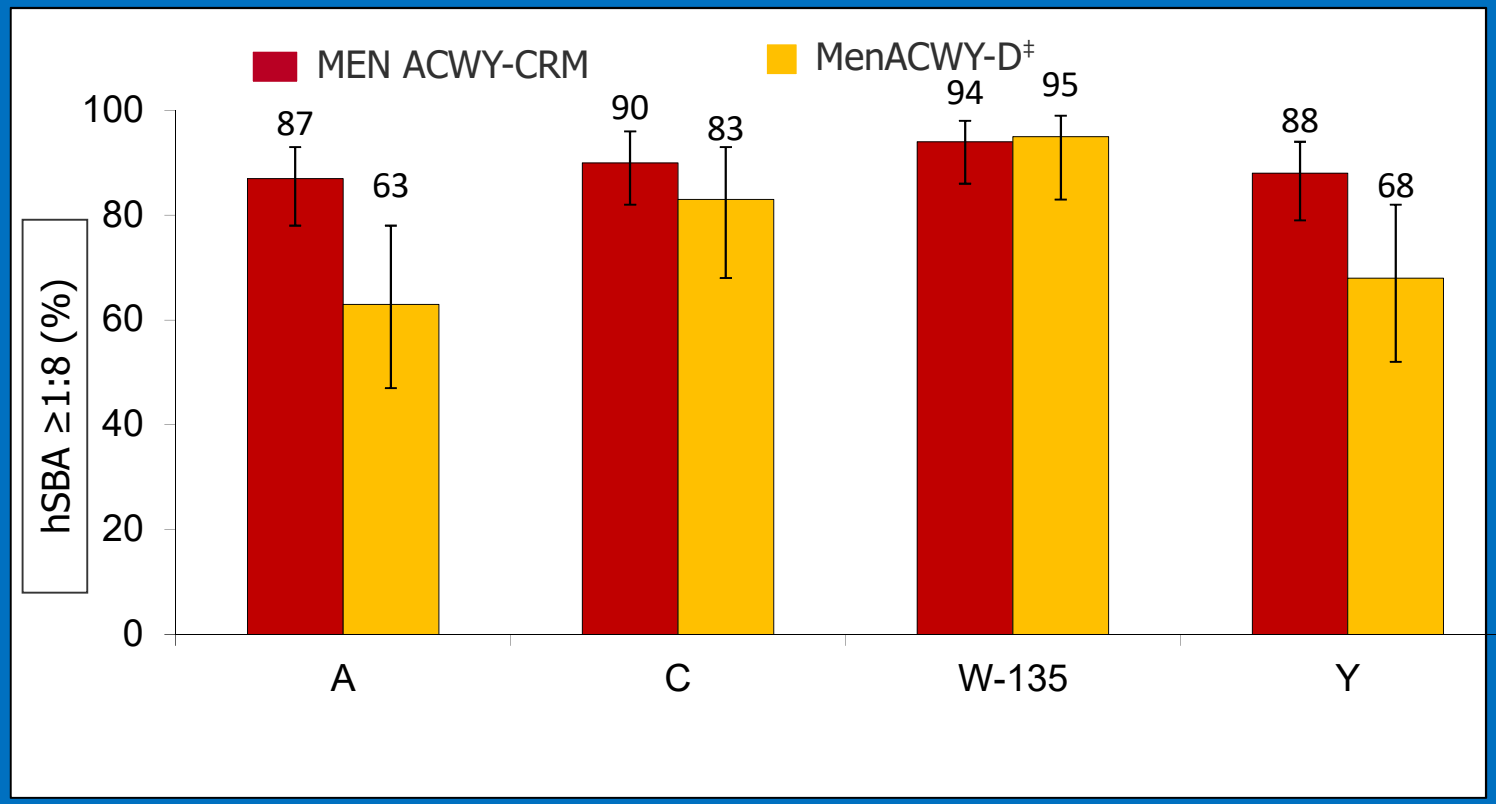
A. Arguedas[a,*], C. Soley[a],
O. Alvarado[a], L. Aguilar[a],

estigational
stered to
ines☆

M. Dull[c]

MEN ACWY-CRM197
ERİŞKİN 56-65 YAŞ

56-65 YAŞ ARASI TEK DOZ MEN ACWY-CRM UYGULAMASINDAN 1 AY SONRA HSBA TİTRESİ >1:8 OLAN HASTA YÜZDESİ MPSV-4 GÖRE BENZER YA DA YÜKSEKTİR.



*.

Stamboulian D, et al. *Int J Infect Dis.* 2010;14:e868-e875;

MEN ACWY-CRM197
ERİŞKİN

56-65 YAŞ ARASINDA MEN ACWY-CRM ile MPSV4 KARŞILAŞTIRMASINDA, MEN ACWY-CRM İYİ TOLERE EDİLMİŞ, LOKAL VE SİSTEMİK YAN ETKİLER KABUL EDİLEBİLİR DÜZEYDEDİR.

*.

Stamboulian D, et al. *Int J Infect Dis.* 2010;14:e868-e875;

19-55 YAŞ ARASINDA MEN ACWY-CRM ile MEN ACWY-D KARŞILAŞTIRMASINDA, MEN ACWY-CRM İYİ TOLERE EDİLMİŞ, LOKAL VE SİSTEMİK YAN ETKİLER KABUL MEN ACWY-D İLE BENZERDİR

Reisinger KS, et al. *Clin Vaccine Immunol*. 2009;16:1810-1815.

MEN ACWY-CRM197
ERİŞKİN 75 YAŞ??

Int J Infect Dis. 2015 Sep;38:36-42. doi: 10.1016/j.ijid.2015.07.003. Epub 2015 Jul 9.

Safety and immunogenicity of an investigational meningococcal ACWY conjugate vaccine (MenACWY-CRM) in healthy Indian subjects aged 2 to 75 years.

Lalwani S[1], Agarkhedkar S[2], Gogtay N[3], Palkar S[1], Agarkhedkar S[2], Thatte U[3], Vakil H[4], Jonnalagedda R[4], Pedotti P[5], Hoyle M[6], Bhusal C[6], Arora A[7].

⊕ Author information

Abstract

BACKGROUND: This phase 3, multi-center, open-label study evaluated the immunogenicity and safety of a quadrivalent meningococcal conjugate vaccine (MenACWY-CRM, Menveo(®); Novartis Vaccines and Diagnostics S.r.l., Siena, Italy) in healthy Indian subjects aged 2-75 years, to provide data for licensure in India.

METHODS: A total of 180 subjects were enrolled (60 subjects 2-10 years, 60 subjects 11-18 years, and 60 subjects 19-75 years) and received one dose of MenACWY-CRM. Serum bactericidal activity with human complement (hSBA) was measured before and 1 month after vaccination. Adverse events were collected throughout the 29-day study period.

RESULTS: Percentages of subjects with post-vaccination hSBA ≥8 were 72%, 95%, 94%, and 90% for serogroups A, C, W, and Y, respectively. Geometric mean titers rose 7-fold to 42-fold against the four serogroups. Similar immune responses were observed for the age subgroups 2-10 years, 11-18 years, and 19-75 years. Seroresponse rates at 1 month following vaccination were 72%, 88%, 55%, and 71% for serogroups A, C, W, and Y, respectively. The vaccine was well tolerated with no safety concerns.

CONCLUSION: A single dose of MenACWY-CRM induced a robust immune response against all four meningococcal serogroups and was well tolerated in an Indian population 2-75 years of age.

MEN ACWY-CRM197

YAN ETKİ

PHARMACOEPIDEMIOLOGY AND DRUG SAFETY 2012; 21: 1350–1358
Published online 16 July 2012 in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/pds.3321

ORIGINAL REPORT

Risk of Guillain–Barré syndrome after meningococcal conjugate vaccination

Priscilla Velentgas[1,2*], Anthony A. Amato[3,4], Rhonda L. Bohn[5], K. Arnold Chan[6,7], Thomas Cochrane[3], Donnie P. Funch[7], Inna Dashevsky[1], April L. Duddy[1], Patricia Gladowski[8], Steven A. Greenberg[3], Judith M. Kramer[9], Cheryl McMahill-Walraven[10], Cynthia Nakasato[11], Claire M. Spettell[10], Beth L. Syat[1], Peter M. Wahl[5], Alexander M. Walker[6,12], Fang Zhang[1], Jeffrey S. Brown[1] and Richard Platt[1]

[1] *Department of Population Medicine, Harvard Medical School and Harvard Pilgrim Health Care Institute, Boston, MA, USA*
[2] *Outcome Sciences, Inc., Cambridge, MA, USA*
[3] *Department of Neurology, Brigham and Women's Hospital, Boston, MA, USA*
[4] *Harvard Medical School, Boston, MA, USA*
[5] *HealthCore, Inc., Wilmington, DE, USA*
[6] *Department of Epidemiology, Harvard School of Public Health, Boston, MA, USA*
[7] *Optum Insight, Waltham, MA, USA*
[8] *Highmark Inc., Pittsburgh, PA, USA*
[9] *Duke Clinical Research Institute, Duke University Medical Center, Durham, NC, USA*
[10] *Aetna, Blue Bell, PA, USA*
[11] *Kaiser Permanente Center for Health Research, Hawai'i, Honolulu, HI, USA*
[12] *World Health Information Science Consultants, LLC, Newton, MA, USA*

MEN ACWY-CRM197

YAN ETKİ

PHARMACOEPIDEMIOLOGY AND DRUG SAFETY 2012; 21: 1350–1358
Published online 16 July 2012 in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/pds.3321

Table 2. Preva

	Vaccinations before GBS onset date	
	MCV4	9 (12.5)
	MPSV4	2 (2.0)
	Tdap	10 (10.1)
	Tetanus	0 (0.0)
	Td	3 (3.0)
	Influenza	9 (9.1)
MCV4	HepB	3 (3.0)
MPSV4	HPV[§]	5 (10.9)
Tdap		
Td	Vaccinations within 42 days of GBS onset date	
Tetanus	MCV4	0 (0.0)
Influenza	MPSV4	1 (1.0)
HepB	Tdap	0 (0.0)
HPV	Tetanus	0 (0.0)
	Td	0 (0.0)
	Influenza	2 (2.0)
	HepB	1 (1.0)
	HPV[§]	2 (4.3)

4,767,471)*

Coadministration
th MCV4, *n* (%)[‡]

85 (0.2)[§]
8,991 (22.8)
1,535 (3.9)
93 (0.2)
1,817 (4.6)
2,708 (6.9)
4,430 (11.3)

[3] *Departn*
[4] *Harvar*
[5] *HealthC*
[6] *Departn*
[7] *Optum*
[8] *Highma*
[9] *Duke C*
[10] *Aetna,*
[11] *Kaiser*
[12] *World Health Information Science Consultants, LLC, Newton, MA, USA*

MEN ACWY-CRM197
2016

Pediatr Infect Dis J. 2016 Feb;35(2):e48-59. doi: 10.1097/INF.0000000000000965.

Immunogenicity and Safety of a 3- and 4-dose Vaccination Series of a Meningococcal ACWY Conjugate Vaccine in Infants: Results of a Phase 3b, Randomized, Open-label Trial.

Block SL[1], Shepard J, Garfield H, Xie F, Han L, Dull PM, Smolenov I.

Author information

Abstract

BACKGROUND: The quadrivalent meningococcal glycoconjugate vaccine MenACWY-CRM is licensed for children from 2 months of age as a 4-dose series. This study assessed the immunogenicity of a 3-dose MenACWY-CRM vaccination series in infants, compared with the 4-dose series, and evaluated the impact of MenACWY-CRM concomitant administration on immune responses to the 13-valent pneumococcal conjugate vaccine (PCV13).

METHODS: Overall, 751 healthy infants (age: 55-89 days) were randomized to receive 3 or 4 doses of MenACWY-CRM (2/4/12 or 2/4/6/12 months of age, respectively) with PCV13 + routine vaccinations (ACWY3 and ACWY4 groups, respectively) or PCV13 + routine vaccinations only (routine group). Immunological noninferiority of the 3-dose versus 4-dose MenACWY-CRM vaccination series was evaluated at 13 months of age for serogroups CWY; noninferiority of immune responses to PCV13 serotypes for concomitant administration of MenACWY-CRM and PCV13 was evaluated at 7 and 13 months of age.

RESULTS: At 13 months, 88%-100% of subjects in groups ACWY3 and ACWY4 achieved seroprotective bactericidal antibody titers against serogroups ACWY; noninferiority criteria for the 3-dose versus 4-dose MenACWY-CRM vaccination series were met. At 7 months, noninferiority criteria were met for all PCV13 serotypes except for serotypes 3 and 5 (group ACWY3) and 19A (group ACWY4). At 13 months, noninferiority criteria were met for all PCV13 serotypes for both ACWY groups.

CONCLUSIONS: After completion of either MenACWY-CRM vaccination series, most subjects achieved seroprotective titers against serogroups ACWY, with the 3-dose series being noninferior to the 4-dose series for serogroups CWY, and no interference with immune responses against PCV13 serotypes was observed (NCT01214837).

MEN ACWY-CRM197
DİĞER AŞILAR İLE BİRLİKTE?

2, 4, 6 ay
- DTaP
- IPV
- Hib
- HBV
- PRV
- PCV7
- PCV13

2-12 ay

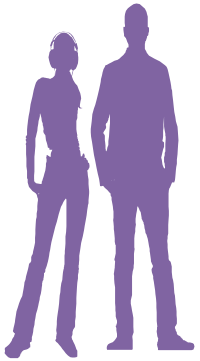
- MMR + suçiçeği
- MMRV
- HAV
- PCV7
- PCV13

12 -24ay

Veri bulunmamaktadır.

2-10 yaş

- Tdap*
- HPV*†



Ergen

MEN ACWY-CRM197
KORUYUCULUK SÜRESİ

ener çağrı dinleyici

Hum Vaccin Immunother. 2016 May 3;12(5):1300-10. doi: 10.1080/21645515.2015.1136040. Epub 2016 Feb 1.

Persistence of the immune response after MenACWY-CRM vaccination and response to a booster dose, in adolescents, children and infants.

Baxter R[1], Keshavan P[2], Welsch JA[3], Han L[3], Smolenov I[2].

⊕ Author information

Abstract

Persistence of bactericidal antibodies following vaccination is extremely important for protection against invasive meningococcal disease, given the epidemiology and rapid progression of meningococcal infection. We present an analysis of antibody persistence and booster response to MenACWY-CRM, in adolescents, children and infants, from 7 clinical studies. Immunogenicity was assessed using the serum bactericidal assay with both human and rabbit complement. Post-vaccination hSBA titers were high, with an age- and serogroup-specific decline in titers up to 1 y and stable levels up to 5 y The waning of hSBA titers over time was more pronounced among infants and toddlers and the greatest for serogroup A. However, rSBA titers against serogroup A were consistently higher and showed little decline over time, suggesting that protection against this serogroup may be sustained. A single booster dose of MenACWY-CRM administered at 3 to 5 y induced a robust immune response in all age groups.

MEN ACWY-CRM197
TAŞIYICILIK ÜZERİNE ETKİLİLİK

Impact of a Quadrivalent Conjugate (MenACWY-CRM) or a Serogroup B (4CMenB) Meningococcal Vaccine on Meningococcal Carriage in English University Students

R.C. Read, *D. Baxter, D.R. Chadwick, S.N. Faust, A. Finn, S. Gordon, P.T. Heath, D.J.M. Lewis, A.J. Pollard, D.P.J. Turner, R. Bazaz, T. Ganguli, T. Havelock, K.R. Neal, I. Okike, B. Morales-Aza, K. Patel, M.D. Snape, J. Williams, S. Gilchrist, S.J. Gray, D. Toneatto, C. Kittel, M. McCarthy, P.M. Dull, R. Borrow*

MEN ACWY-CRM197
TAŞIYICILIK ÜZERİNE ETKİLİLİK

- Faz 3, çok merkezli, randomize kontrollü çalışma
  İngiltere'de 10 üniversitede 2968 öğrenci
  Eylül-Kasım 2010
  2 doz 4CMenB (BEXSERO) veya
  Tek doz **MenACWY-CRM**
  Kontrol 2 doz Japon Ensefaliti aşısı (IXIARO)
  Bazal, 1, 2, 4, 6 ve 12.ayda nasofaringeal örnek

Çalışma başlangıcında herhangi bir N. meningitidis suşu taşıyıcılığı %33, Men B %9, Men Y %7, Men W135 %2, Men C %0.3, Men A % 0

MEN ACWY-CRM197
TAŞIYICILIK ÜZERİNE ETKİLİLİK

MenACWY-CRM İLE AŞILAMADAN 1 AY SONRA

		Çalışma Grubu		Efficacy % (95% CI)
		MenACWY-CRM	Kontrol	
1. AY	n	56	58	**16.0%** (-27.3 – 44.5)
	%	**5.87%**	**6.12%**	
	N	954	947	

MEN ACWY-CRM197
TAŞIYICILIK ÜZERİNE ETKİLİLİK

MenACWY-CRM İLE AŞILAMADAN 3 AY SONRA

		Çalışma Grubu		Efficacy % (95% CI)
		MenACWY-CRM	Kontrol	
A, C, W, Y	n	193	260	**36.2%** (15.6 – 51.7)
	%	**5.5%**	**7.4%**	
	N	3520	3504	
Y	n	157	227	**39.0%** (17.3 – 55.0)
	%	**4.5%**	**6.5%**	
	N	3520	3504	

MEN ACWY-CRM197
TAŞIYICILIK ÜZERİNE ETKİLİLİK

Read et al. Vaccine 2017

MenACWY-CRM İLE AŞILAMADAN 1 YIL SONRA

- Fonksiyonel antikor düzeylerinin halen yüksek olduğu gösterişmiş.
- Aşı immünojenik
- hSBA titeleri ile nazofaringeal taşıyıcılık arasında bir ilişki saptanmamış.

,

MEN ACWY-CRM197
HIV

MMWR 2016 KASIM

MenACWY-CRM İ HIV POZİTİF 2 AYDAN BÜYÜK KİŞİLERDE RUTİN AŞILAMA ÖNERİSİ

- **Diğer tanımlanmış risk grupları**
- Kompleman eksiklikleri (C3, properdin, Factor D, Factor H, C5-9 eksiklikleri
- Eculizimab (Soliris) kullanımı: atipik HÜS ya da PNH tedavisinde kullanılan bu ilaç C5'e bağlanarak terminal kompleman eksikliğine neden oluyor
- Fonksiyonel aspleni, orak hücre anemisi

MEN ACWY-CRM197
2017

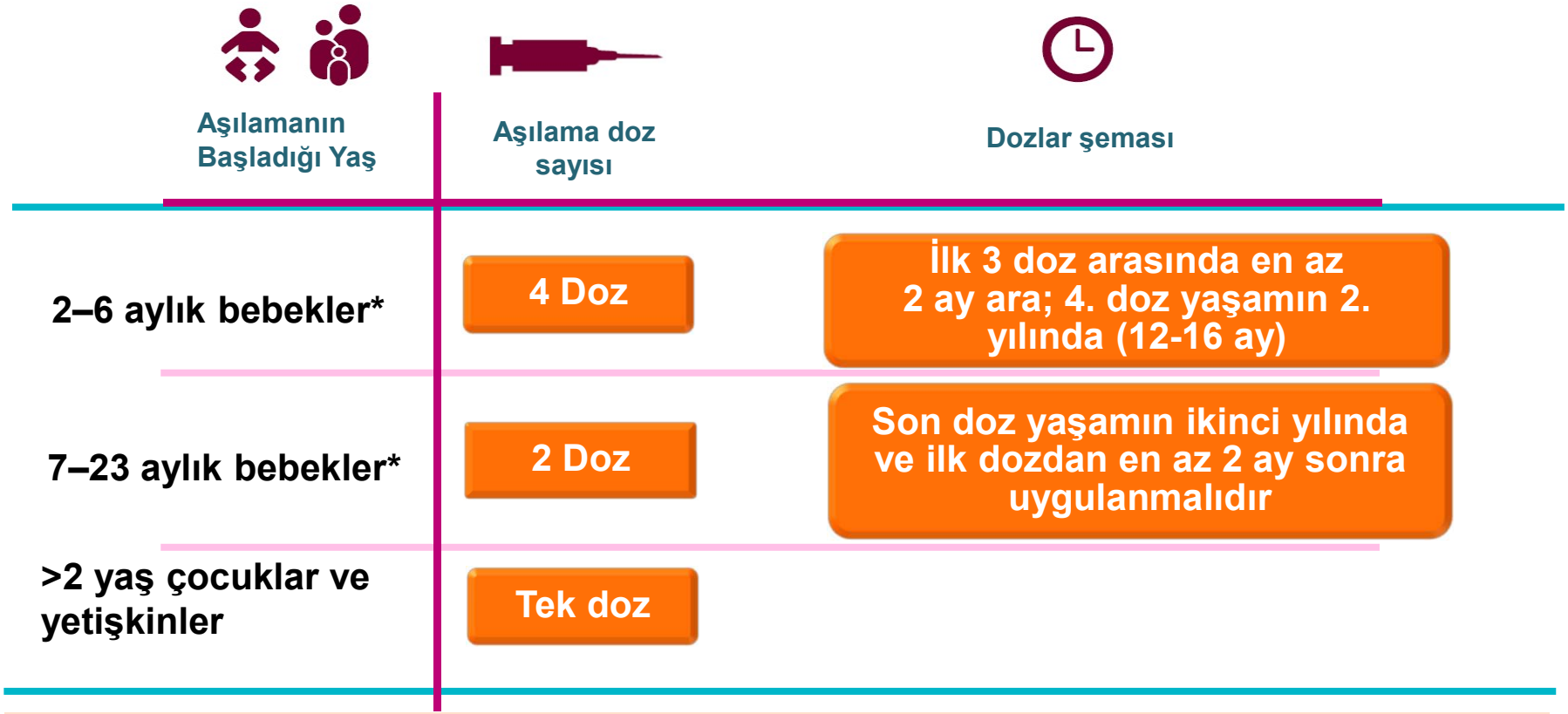
Pediatrics. 2017 Jan;139(1). pii: e20162084. doi: 10.1542/peds.2016-2084.

1. **Safety of Quadrivalent Meningococcal Conjugate Vaccine in 11- to 21-Year-Olds.**

Tseng HF[1], Sy LS[2], Ackerson BK[3], Hechter RC[2], Tartof SY[2], Haag M[4], Slezak JM[2], Luo Y[2], Fischetti CA[2], Takhar HS[2], Miao Y[5], Cunnington M[6], Solano Z[2], Jacobsen SJ[2].

- **48.899 MENVEO** uygulanmış, 11-21 yaş arasındaki genç 1 yıl süre ile takip edilmiş.
- 21 farklı klinik durum izlenmiş (nörolojik, romatolojik, hematolojik, endokrin, renal, infeksiyon hastalıkları).
- Hiçbir yan etki bildirimi olmamış.
- Sadece geçici yüz felci (Bell's Palsy) ile istatistik ilişki? Diğer aşılar ile birlikte uygulanması durumunda saptanmış, tek başına uygulamada rastlanmamış.
- Şans? Altta yatan hastalık?

MENVEO UYGULAMA ŞEKLİ



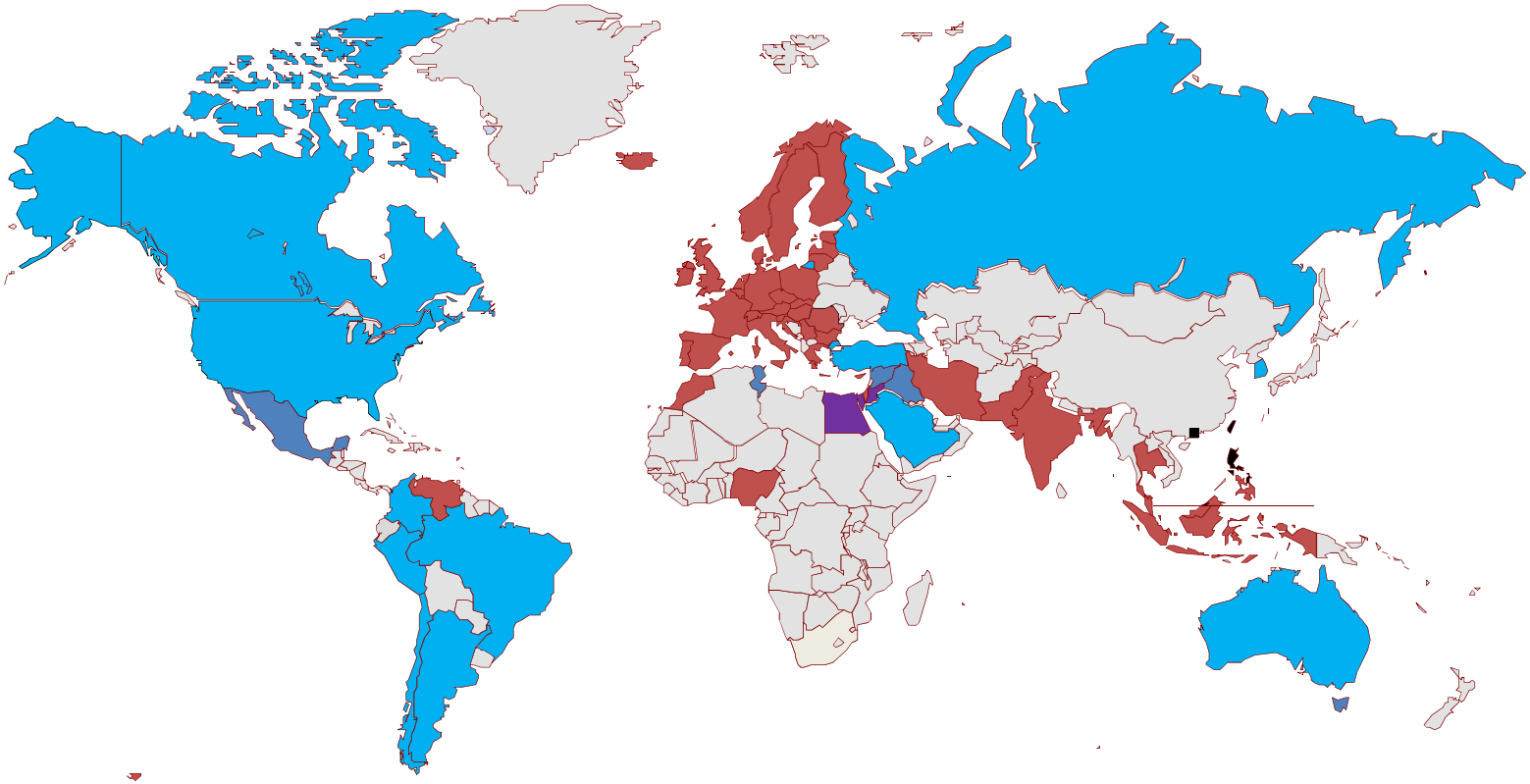
2-9 ay arası kullanımı, klinik ve laboratuar olarak dokümante edilmiş risk grubunda[µ] yer alan hastalarda önerilmektedir. Bu aşının kullanımı resmi tavsiyelere uygun olmalıdır.[1]

[µ]Kompleman komponent eksikliği (C3, C5-9, Properdin, Faktör H, Faktör D gibi); fonksiyonel veya anatomik aspleni; bebeğin, salgın sebebiyle meningokok maruziyet riskinin yüksek olduğu bir bölgede yaşaması; bebeğin, endemik bir bölgeye seyahati.

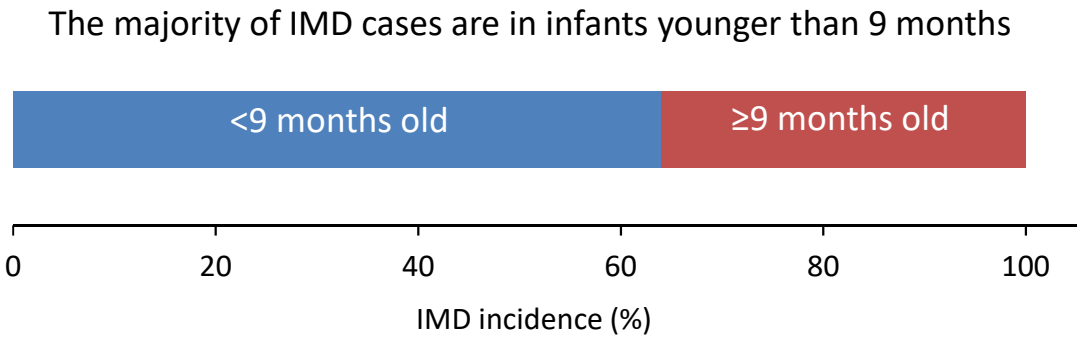
1. Menveo Kısa Ürün Bilgisi.

MEN ACWY-CRM197

2017 60'dan fazla ülkede ruhsatlı



Argentina became the first country to introduce MENVEO in the national immunisation programme for infants ≥3 months



2016: MENVEO was recommended for infants at **3, 5,** and **15 months** old + adolescent dose at **11 years**

- Reduce disease burden in young children
- Strengthen epidemiological surveillance

Ministerio de Salud, 2016. http://www.msal.gob.ar/images/stories/bes/graficos/0000000927cnt-2016-12_lineamientos-meningo.pdf (accessed August 2017)

MENINGOCOCCAL DISEASE

A story by numbers

EVERY **10** MINUTES
1 PERSON DIES WORLDWIDE[1]

EVERY MINUTE
1 NEW PERSON IS DIAGNOSED
WORLDWIDE[1]

IT CAN KILL WITHIN **24** HOURS AND IS EASILY MISDIAGNOSED[2,3]

1 OUT OF **10** CASES ENDS IN DEATH[2]

2 OUT OF **10** SURVIVORS SUFFER PERMANENT DISABILITY

MENİNGOKOK ENFEKSİYONLARI
KORUNMA

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KORUNMA

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KORUNMA

Excellence is a road, not a destination

Cont'd. 2017. Ener Cagri Dinleyici