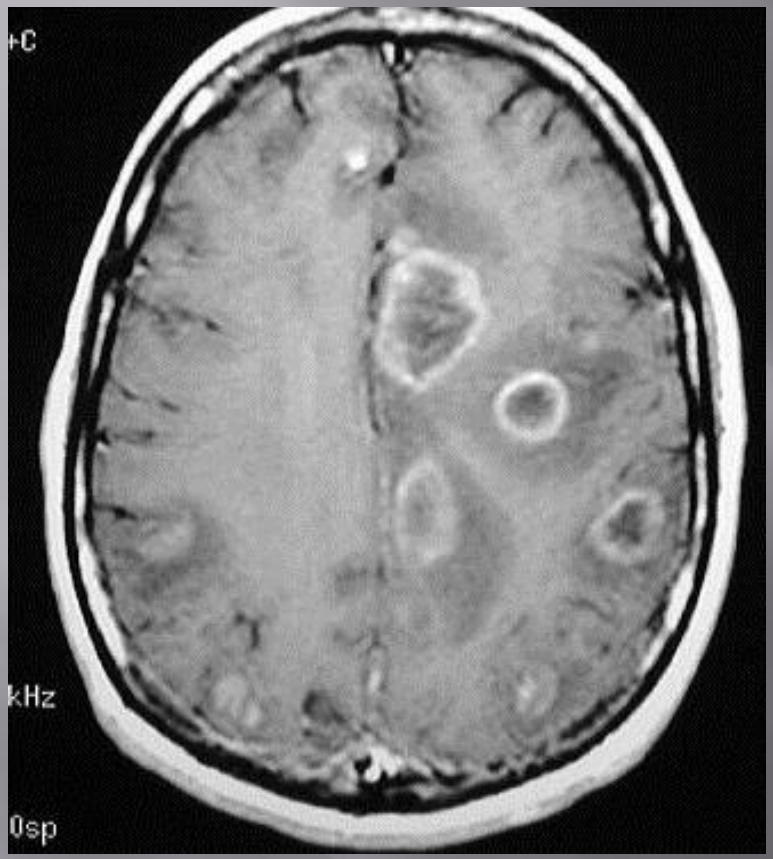
PARAZİTER İNFEKSİYONLAR

TOKSOPLAZMOZ

E. Ediz Tütüncü

KLİMİK 2013
XVI. Türk Klinik Mikrobiyoloji ve İnfeksiyon Hastalıkları Kongresi
15 Mart 2013, Antalya


+C
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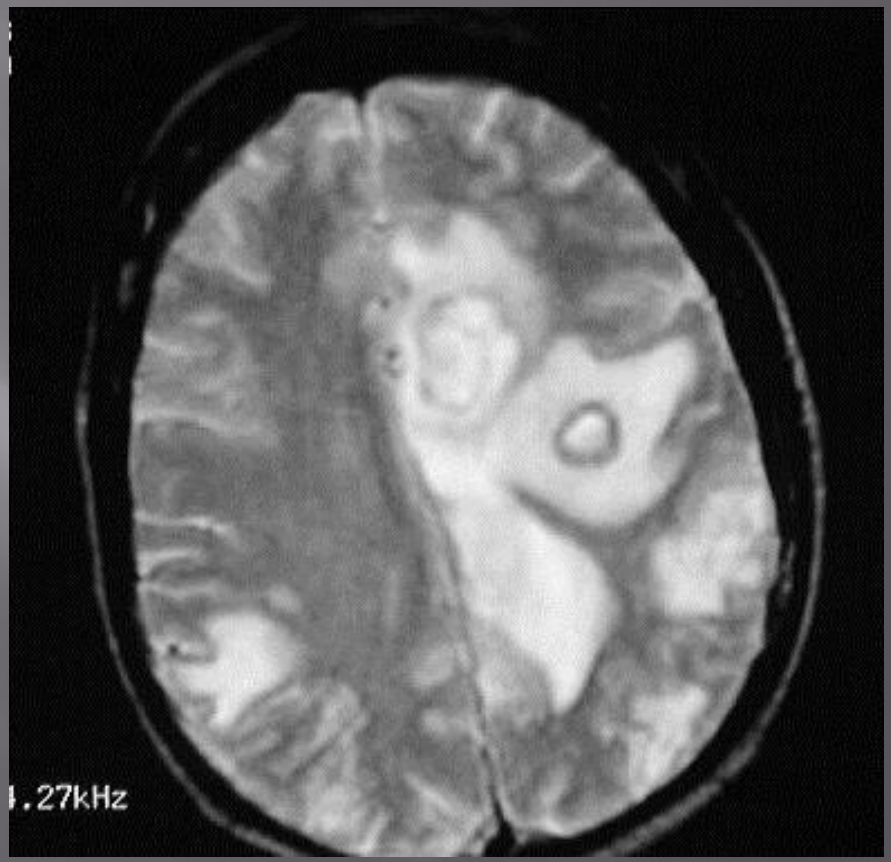

.27kHz

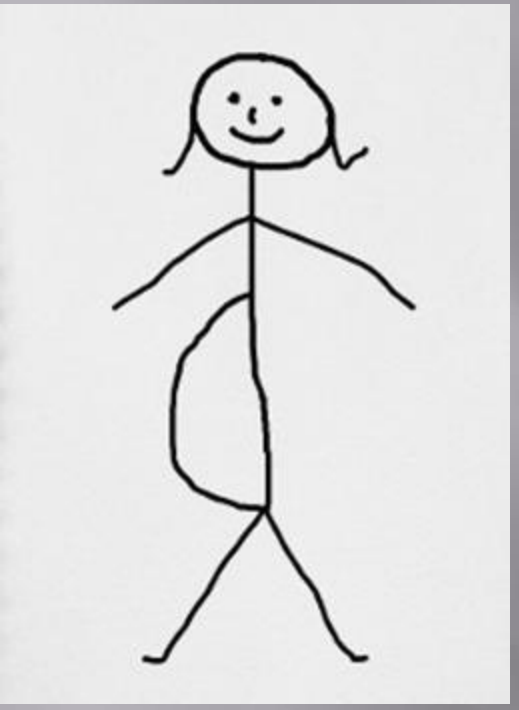
Simple is beautiful.

HASTA KONSÜLTASYON FORMU

Revizyon No: 01	Doküman No: YBH-FR-67
Revizyon Tarihi: 17.08.2007	Sayfa No: 1/1
Yayın Tarihi : 14.06.2006	

	Konsültasyonu Öneren Şef/Uzmanın	Konsültasyonu İsteyen Doktorun
	Adı Soyadı	Adı Soyadı
kek ☐ Kadın ☐	İmza	İmza
	Birimi	Birimi
	Tarih/Saat	Tarih/Saat
		Konsültasyonun Yapılacağı Yer
		Hasta Yatağında ☐ Acil ☐

Sn Dr. [illegible]
Toxo IgM (+) saptanan hastanın
tarafınızca değerlendirilmesi ...



Olgu

32 yaşında,
12 haftalık gebe,
Primigravid,
Antenatal izleminde özellik yok.

Perinatal Journal • Vol: 18, Issue: 3/December 2010
e-Address: http://www.perinataljournal.com/20100183005

Seroprevalence of Toxoplasmosis Among Pregnant Women in Kayseri

Tuba Kayman,[1] Mesut Kayman[2]

[1]*Kayseri Eğitim ve Araştırma Hastanesi, Mikrobiyoloji Laboratuvarı, Kayseri*
[2]*Kayseri Doğumevi ve Çocuk Hastalıkları Hastanesi, Kadın Hastalıkları ve Doğum Kliniği, Kayseri*

2006-2008
Kayseri
1676 gebe

T. gondii IgG (+) %33,9

Kafkas Univ Vet Fak Derg
18 (Suppl-A): A89-A92, 2012

RESEARCH ARTICLE

Erciyes Üniversitesi Tıp Fakültesi Hastanesi Parazitoloji Laboratuvarına Müracaat Eden Hastalarda Anti-*Toxoplasma gondii* Antikorlarının Dağılımı

Süleyman YAZAR * Salih KUK * Ülfet ÇETİNKAYA * Muhittin KAYA * İzzet ŞAHİN *

* Erciyes Üniversitesi, Tıp Fakültesi, Tıbbi Parazitoloji Anabilim Dalı, TR-38039 Kayseri - TÜRKİYE

2009-2011
Kayseri
336 erkek, 1245 kadın,
toplam 1581 kişi

T. gondii IgG (+) %28,8

Dicle Tıp Derg/Dicle Med J
Copyright © Dicle Tıp Dergisi 2009 Cilt/Vol 36, No 3, 170-172

ÖZGÜN ARAŞTIRMA / ORIGINAL RESEARCH

Gebelerde Toksoplasma gondii Seroprevalansı

Seroprevalence of Toxoplasma gondii in Pregnant Women

Servet Kölgelier[1], Hayati Demiraslan[2], Bekir Kataş[3], Dilek Güler[3]

[1]82. Yıl Devlet Hastanesi ve [2]Adıyaman Devlet Hastanesi Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji Kliniği, [3]Kadın Hastalıkları ve Doğum Kliniği-Adıyaman

2007-2008
Adıyaman
455 gebe

T. gondii IgG (+) %48,4

Iranian J Publ Health, Vol. 40, No.1, 2011, pp.63-67

Original Article

Seroprevalence and Coinfections of *Toxoplasma gondii* in Childbearing Age Women in Turkey

**I Akyar*

Dept. of Microbiology, Medical Faculty, Acibadem University, Istanbul, Turkey

(Received 26 Jul 2010; accepted 25 Feb 2011)

Abstract

Background: Our aim was to detect the rate of *Toxoplasma gondii* infections and the coinfections in childbearing age women in Turkey accompanying using seroprevalence data from a multicenter hospital setting.

Methods: Overal, 17751 childbearing age women through 16-45 years were included to the study between 2004 and 2010. The clinical samples of the patients were collected from 16 hospitals and medical centers mostly from Istanbul and three other cities from Turkey. Enzyme immunoassay tests were performed in our central laboratory in Istanbul to investigate *T. gondii* with other TORCH infections or Epstein Barr virus, Hepatitis B virus, Hepatitis C virus and Human Immunodificiency virus as accompanying infections.

2004-2010
İstanbul, Bursa, Adana, Kayseri ve Kocaeli
16 merkez
17751 kadın

T. gondii IgG (+) %24,6

Iranian J Publ Health, Vol. 40, No.1, 2011, pp.63-67

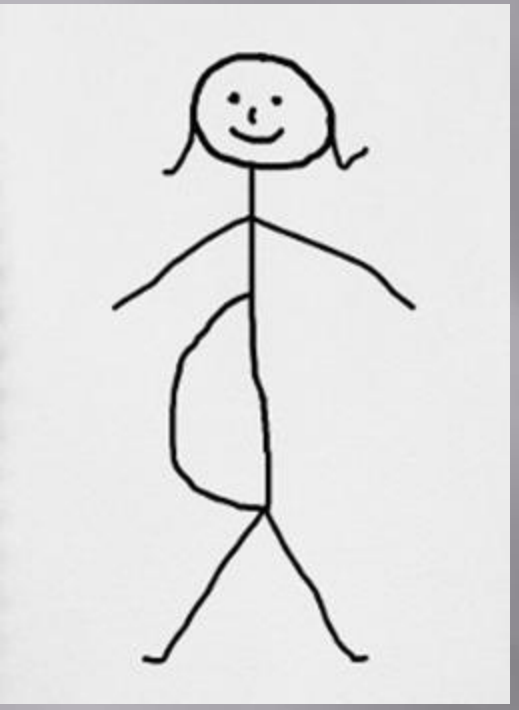
Original Article

Seroprevalence and Coinfections of *Toxoplasma gondii* in Childbearing Age Women in Turkey

**I Akyar*

Dept. of Microbiology, Medical Faculty, Acibadem University, Istanbul, Turkey

Years	*T. gondii* Ig M positive (n/%)	*T. gondii* Ig G positive (n/%)
2004	21/ 1.40	464/ 31.12
2005	21/ 1.15	798/ 43.77
2006	34/ 1.66	482/ 23.65
2007	36/ 1.22	602/ 20.52
2008	40/ 1.27	690/ 21.95
2009	55/ 1.41	829/ 21.38
2010	31/ 1.26	505/ 20.64
Total	238/ 1.34	4370/ 24.6

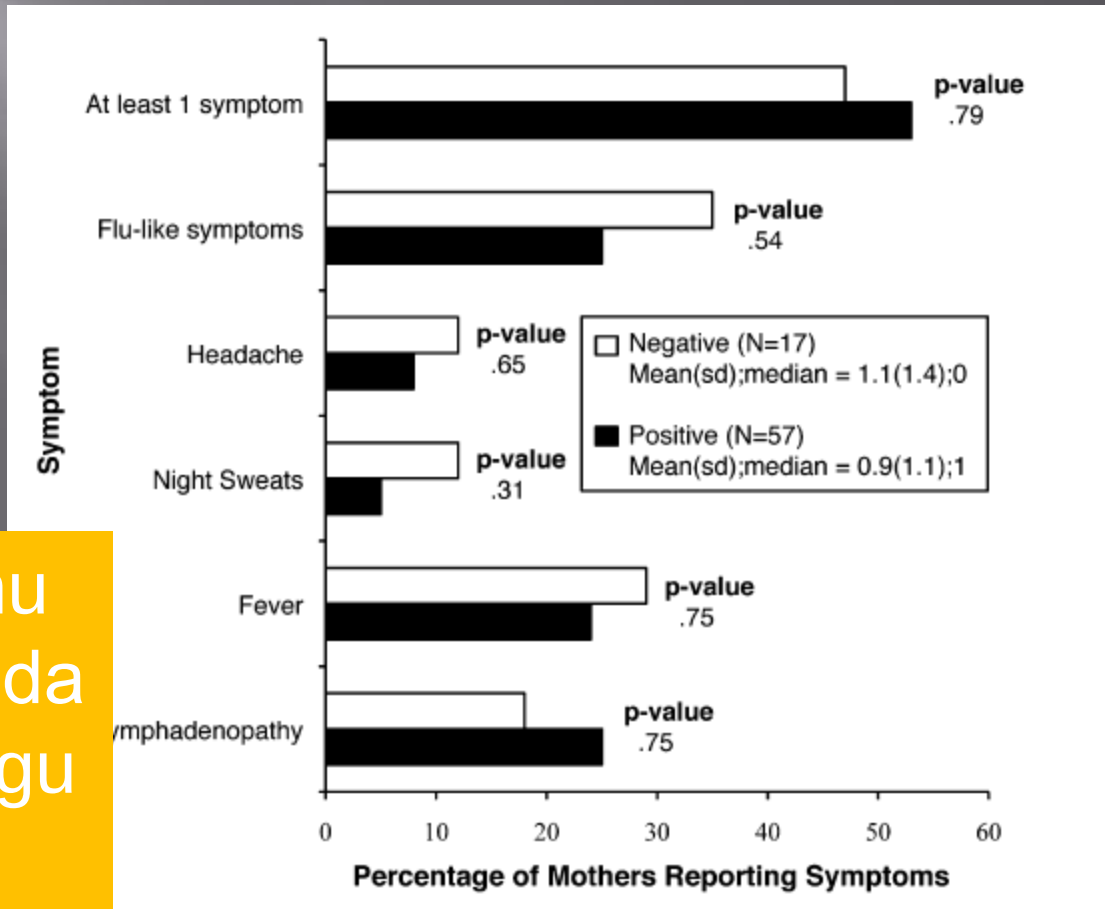


Olgu

32 yaşında,
12 haftalık gebe,
Primigravid,
Antenatal izleminde özellik yok,
Herhangi bir yakınması yok.

Unrecognized Ingestion of *Toxoplasma gondii* Oocysts Leads to Congenital Toxoplasmosis and Causes Epidemics in North America

Kenneth Boyer,[1,2] Dolores Hill,[3] Ernest Mui,[4] Kristen Wroblewski,[5] Theodore Karrison,[5] J. P. Dubey,[3] Mari Sautter,[4] A. Gwendolyn Noble,[4,6] Shawn Withers,[5] Charles Swisher,[7] Peter Heydemann,[1,8] Tiffany Hosten,[4] Jane Babiarz,[4] Daniel Lee,[4] Paul Meier,[5,9,*] Rima McLeod,[4,10,11,12] and other members of the Toxoplasmosis Study Group[a]



Akut *T. gondii* infeksiyonu geçiren gebelerin çoğunda belirgin semptom ve bulgu saptanmaz.

Konjenital toksoplazmoz tanısı alan çocuk sahibi olan annelerin %52'si, gebelikleri sırasında infeksiyon düşündürecek hiçbir tablo tanımlamamaktadırlar.

Boyer KM. Am J Obstet Gynecol 2005;192:564

Primer maternal infeksiyon sırasında parazitlerin plasenta yoluyla geçişi fetal infeksiyona yol açar.

maternal parazitemi,

iyi gelişmiş plasental kan akımı,

maternal bağışıklığın henüz gelişmemesi.

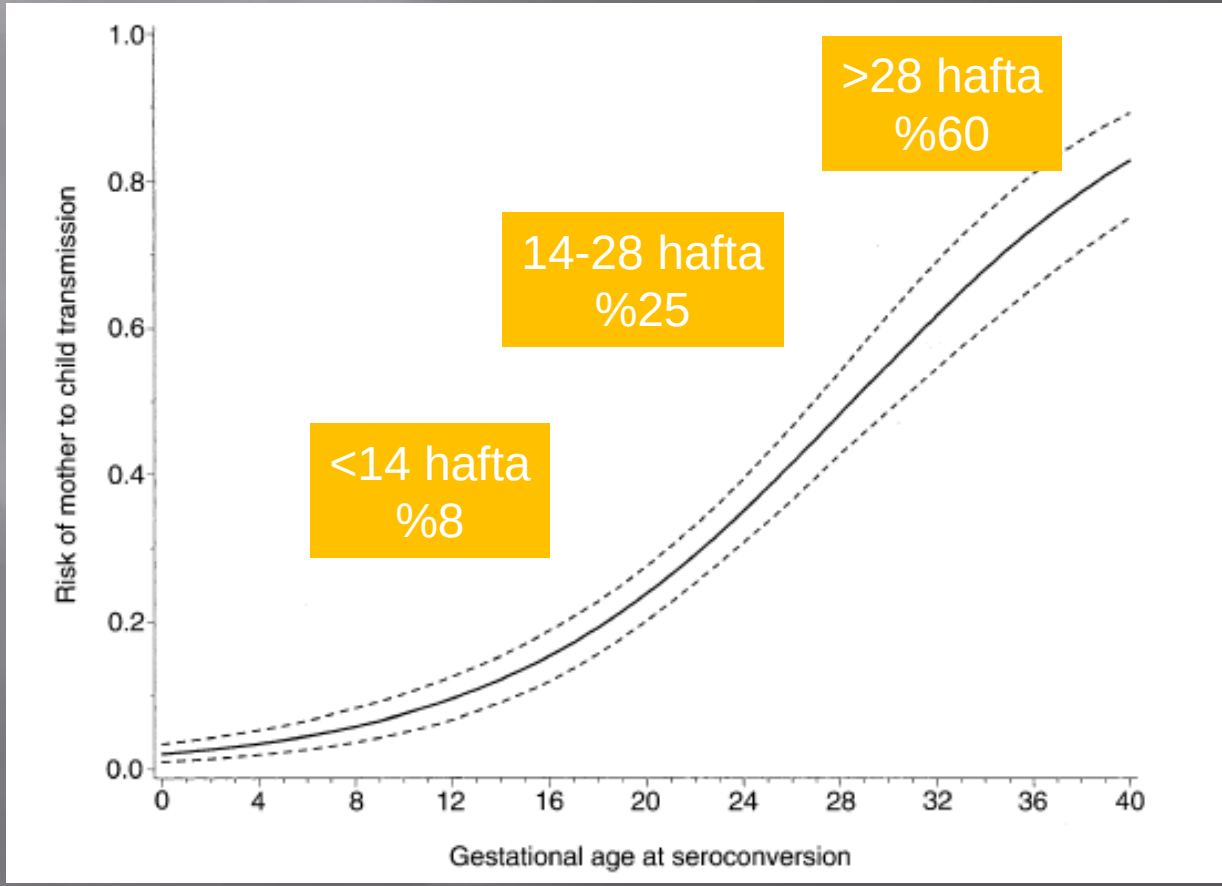
Parazitin plasentada inflamatuvar bir odak oluşturması ve gebeliğin ilerleyen dönemlerinde takizoitlerin fetal dolaşıma salınması.

Gilbert RE. Int J Epidemiol 2001;30:1303

BJOG: an International Journal of Obstetrics and Gynaecology
February 2003, Vol. 110, pp. 112–120

Effect of timing and type of treatment on the risk of mother to child transmission of *Toxoplasma gondii*

European Multicentre Study on Congenital Toxoplasmosis*

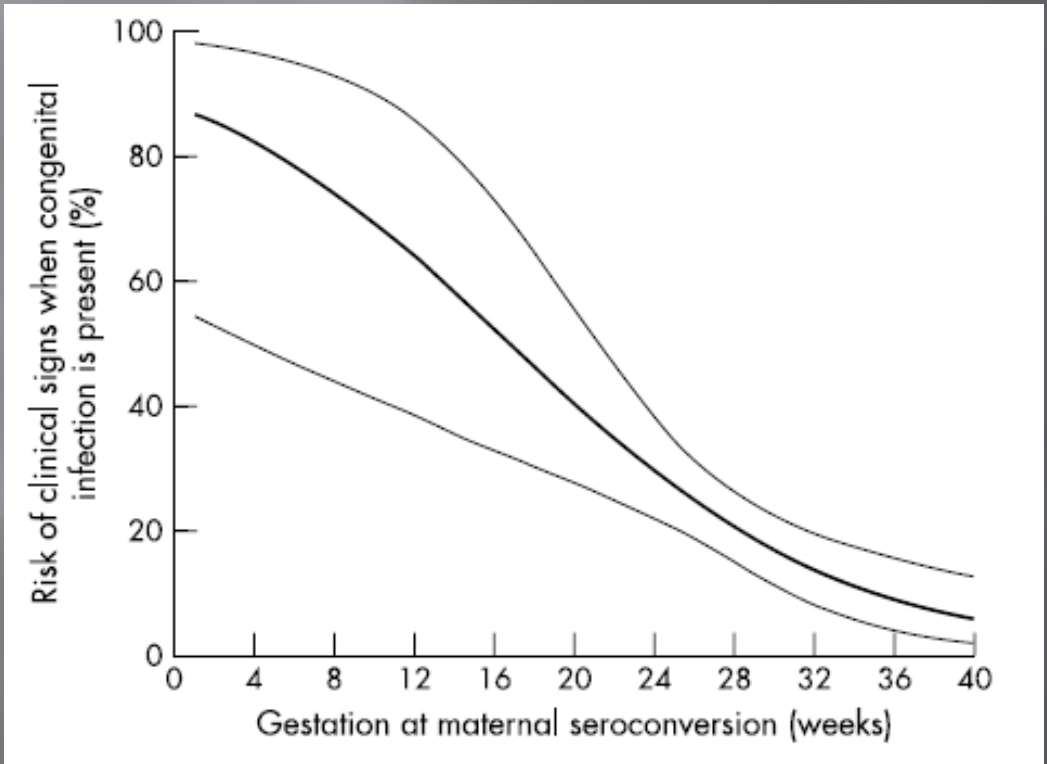


REVIEW

Congenital toxoplasmosis in the United Kingdom: to screen or not to screen?

R E Gilbert, C S Peckham

J Med Screen 2002;**9**:135–141



CLINICAL PRACTICE INVITED ARTICLE

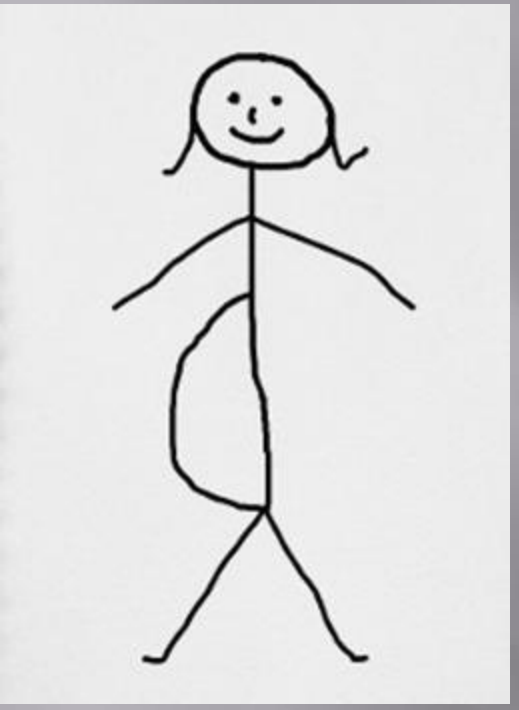
Ellie J. C. Goldstein, Section Editor

Management of *Toxoplasma gondii* Infection during Pregnancy

Jose G. Montoya and Jack S. Remington

Palo Alto Medical Foundation Toxoplasma Serology Laboratory, Palo Alto, and Department of Medicine and Division of Infectious Diseases and Geographic Medicine, Stanford University School of Medicine, Stanford, California

Tüm gebelerde, ideal olarak ilk trimesterde *T. gondii* IgG ve IgM ile serolojik tarama yapılması ve seronegatif kadınların izleme alınması optimal yaklaşımdır.



Olgu

32 yaşında,
12 haftalık gebe,
Primigravid,
Antenatal izleminde özellik yok,
Herhangi bir yakınması yok,
T. gondii IgM (+).

Gebelik döneminde saptanan *T. gondii* IgM pozitifliği, her zaman yeni edinilmiş infeksiyon anlamına gelir mi?

Epidemiol. Infect. (2004), **132**, 541–548. © 2004 Cambridge University Press
DOI: 10.1017/S0950268803001948 Printed in the United Kingdom

Duration of the IgM response in women acquiring *Toxoplasma gondii* during pregnancy: implications for clinical practice and cross-sectional incidence studies

L. GRAS[1], R. E. GILBERT[1]*, M. WALLON[2], F. PEYRON[2] AND M. CORTINA-BORJA[1]

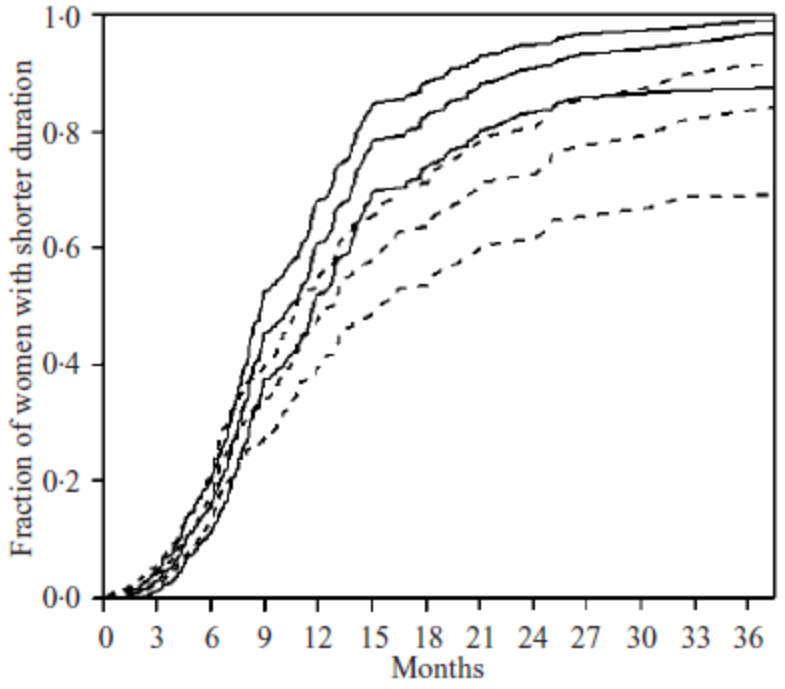


Fig. 1. Duration of detection of IgM antibodies and 95% CIs using the IFT (—), and the ISAGA test (– – –).

446 infekte gebede

ISAGA 12,8 ay median
IFT 10,4 ay median

24. ayda pozitiflik
ISAGA %27,1
IFT %9,1

JOURNAL OF CLINICAL MICROBIOLOGY, Dec. 1997, p. 3112–3115 Vol. 35, No. 12
0095-1137/97/$04.00+0

Evaluation of Six Commercial Kits for Detection of Human Immunoglobulin M Antibodies to *Toxoplasma gondii*

MARIANNA WILSON,[1]* JACK S. REMINGTON,[2] CHARLES CLAVET,[3] GEORGE VARNEY,[3] CYNTHIA PRESS,[2] DORIS WARE,[1] AND THE FDA TOXOPLASMOSIS AD HOC WORKING GROUP[4]†

Division of Parasitic Diseases, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia[1]; Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, Palo Alto, California[2]; Winchester Engineering and Analytical Center, Food and Drug Administration, Winchester, Massachusetts[3]; and Center for Devices and Radiological Health, Food and Drug Administration, Rockville, Maryland[4]

TABLE 2. Sensitivity, specificity, and rates of equivocal results for commercially available kits for detection of *Toxoplasma* IgM[a]

Kit	Sensitivity (%)	Specificity (%)	% Equivocal results
PAMF IgM ELISA	100	100[b]	0
CDC EIA IgM	100	99.1	0
bioMérieux VIDAS Toxo IgM	100	98.6	0.9
Sanofi Platelia Toxo IgM	100	96.8	3.6
BioWhittaker Toxocap-M	100	95.9	2.7
Gull Toxo IgM	97	85.6	2.3
Abbott Toxo-M EIA	100	84.2	7.7
Abbott IMx Toxo IgM			
Version 1	100	77.5	9.0
Version 2	93.3	97.3	2.3

[a] Sensitivity was calculated on the basis of results for 30 samples, and specificity was calculated on the basis of results for 222 samples.

CLINICAL PRACTICE INVITED ARTICLE

Ellie J. C. Goldstein, Section Editor

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Jose G. Montoya and Jack S. Remington

Palo Alto Medical Foundation Toxoplasma Serology Laboratory, Palo Alto, and Department of Medicine and Division of Infectious Diseases and Geographic Medicine, Stanford University School of Medicine, Stanford, California

IgM antikorları 12 aydan daha uzun süreyle saptanabileceği için, bir gebede pozitif ya da sınırda değer varlığı, referans laboratuvarlarda doğrulama gerektirir.

Pozitif IgM sonuçlarının ancak %40'ının gerçekten akut infeksiyonu gösterdiği bildirilmiş.

CLINICAL PRACTICE INVITED ARTICLE

Ellie J. C. Goldstein, Section Editor

Management of *Toxoplasma gondii* Infection during Pregnancy

Jose G. Montoya and Jack S. Remington

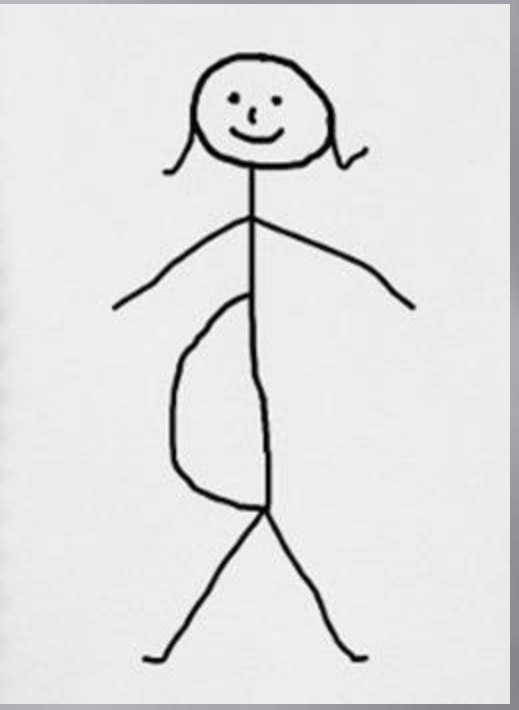
Palo Alto Medical Foundation Toxoplasma Serology Laboratory, Palo Alto, and Department of Medicine and Division of Infectious Diseases and Geographic Medicine, Stanford University School of Medicine, Stanford, California

IgM(+) / IgG(+)
Serum referans laboratuvara gönderilir.

IgM(+) / IgG(-)
Tetkik 1-3 hafta içinde tekrarlanmalıdır.

IgM(+) / IgG(-)
Klinik anlamı yok

IgM(+) / IgG(+)
Serokonversiyon



Olgu

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12 haftalık gebe,
Primigravid,
Antenatal izleminde özellik yok,
Herhangi bir yakınması yok,
T. gondii IgM (+),
T. gondii IgG (+).


PALO ALTO MEDICAL FOUNDATION

Toksoplazma serolojik profili

Sabin-Feldman boya testi,
AC/HS test,
IgG avidite testi,
IgA,
IgE.

Dyes as Microchemical Indicators of a New Immunity Phenomenon Affecting a Protozoon Parasite (Toxoplasma)[1]

ALBERT B. SABIN and HARRY A. FELDMAN[2]

The Children's Hospital Research Foundation
and *Department of Pediatrics,*
University of Cincinnati College of Medicine

The purpose of this preliminary communication is to describe a new immunity phenomenon in which dyes of certain chemical composition have been found capable of indicating the presence or absence of antibody activity. This phenomenon was discovered during the course of a search for some *in vitro* manifestation of the action of neutralizing antibody on toxoplasma, an obligate, intracellular protozoon parasite. After finding that toxoplasma in properly diluted mouse peritoneal exudate could be counted with great accuracy in a standard hemocytometer, we observed that in mixtures with immune serum the toxoplasma remained intact but lost the refractility they exhibited in mixtures with normal serum. When, after incubation at room temperature for several hours, large drops of such mixtures were allowed to dry slowly on slides overnight and then were stained with Wright's stain, large numbers of toxoplasma could be seen in the preparation from the normal serum mixture, whereas very few were found in that from the immune serum mixture. Small drops, spread thin and rapidly dried, revealed that, with few exceptions, the cytoplasm of the toxoplasma in the immune serum mixtures was distorted, poorly stained, or unstained as compared with the deep blue staining and granular structure of the cytoplasm of the toxoplasma in the mixtures with normal serum; the chromatin of the toxoplasma appeared the same in both types of mixtures. One of us (A. B. S.) had observed a number of years ago that, when alkaline methylene blue was added on a slide to a drop of peritoneal exudate containing toxoplasma, immediate deep purple staining of the parasites could be observed under the microscope. When this was done with

[1] Aided by a grant from the National Foundation for Infantile Paralysis.

[2] Senior Fellow, National Research Council.

Sabin- Feldman boya testi 1948

IS SABIN-FELDMAN DYE TEST USING *T. GONDII* TACHYZOITES FROM ANIMAL INOCULATION STILL THE BEST METHOD FOR DETECTING *TOXOPLASMA GONDII* ANTIBODIES?

Ruenruetai Udonsom[1], Ruangrat Buddhirongawatr[1,2] and Yaowalark Sukthana[1,3]

[1]Department of Protozoology, Faculty of Tropical Medicine, Mahidol University, Bangkok; [2]Faculty of Veterinary Sciences, [3]International College, Mahidol University, Salaya Campus, Nakhon Pathom, Thailand

Sabin- Feldman boya testi

Nötralizasyon testi,
Canlı mikroorganizmalar kullanılır,
IgG antikorlar saptanır,
Duyarlı ve özgül,
Altın standart

Southeast Asian J Trop Med Public Health 2010;41:1059

JOURNAL OF CLINICAL MICROBIOLOGY, Sept. 1990, p. 1928–1933
0095-1137/90/091928-06$02.00/0

Vol. 28, No. 9

Differential Agglutination Test for Diagnosis of Recently Acquired Infection with *Toxoplasma gondii*

BRIAN R. DANNEMANN,[1,2] WINSTON C. VAUGHAN,[2] PHILLIPE THULLIEZ,[3] AND JACK S. REMINGTON[1,2]*

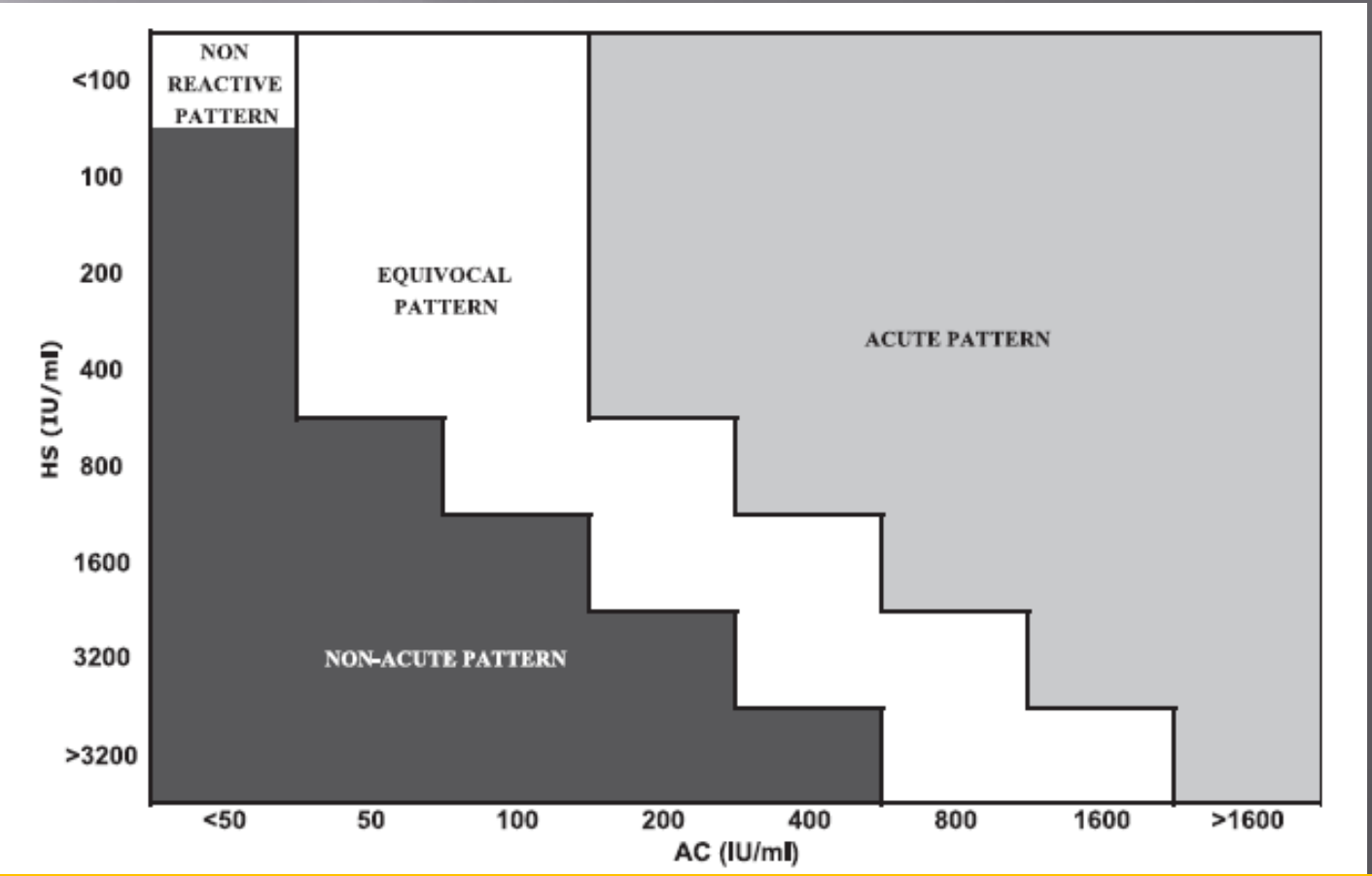
Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, 860 Bryant Street, Palo Alto, California 94301[1]; Stanford University School of Medicine, Stanford, California 94305[2]; and Laboratoire de Serologie Neonatale et de Recherche sur la Toxoplasmose, Institut de Puericulture de Paris, 75014 Paris, France[3]

AC/HS testi

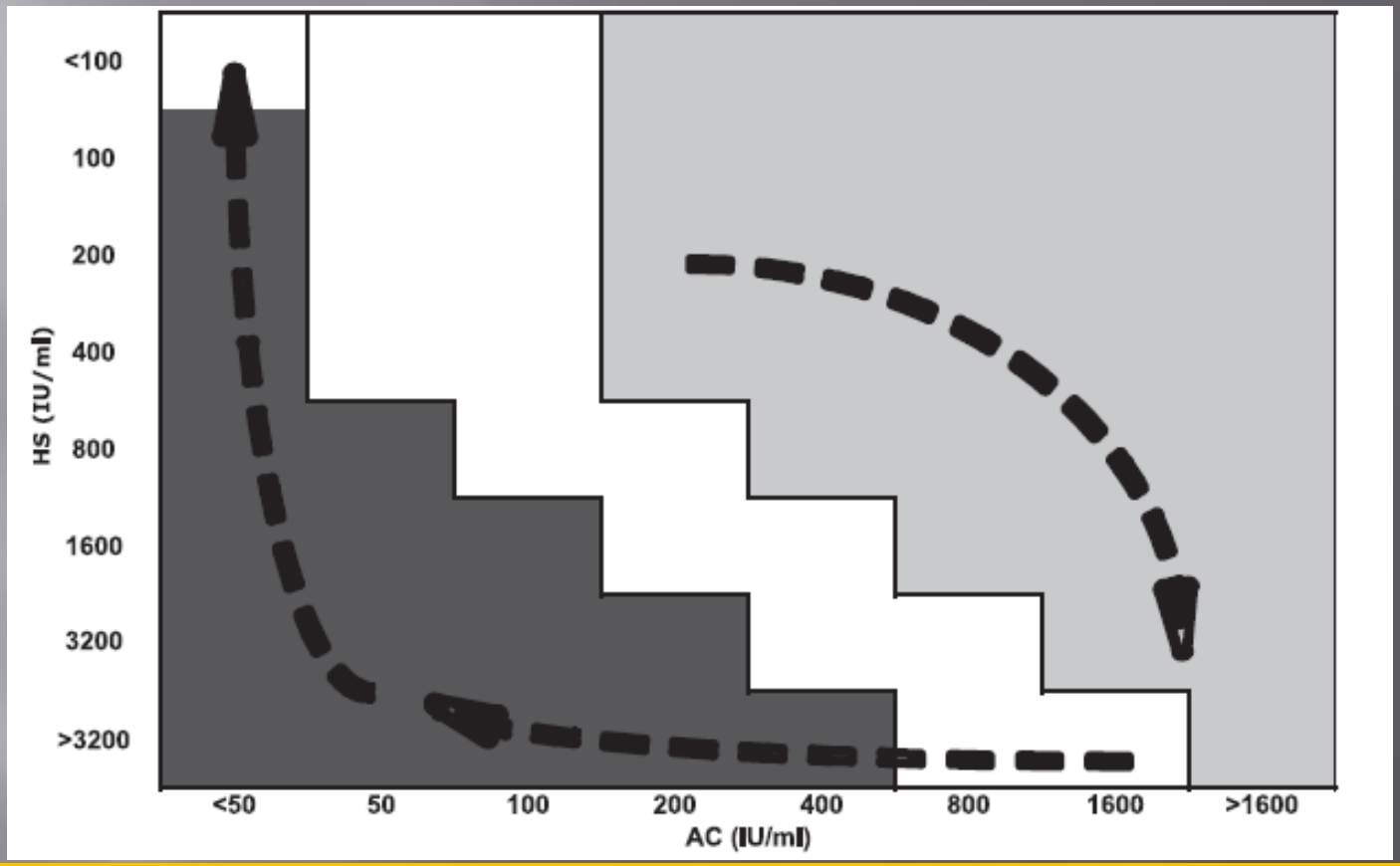
Ayırt edici aglütinasyon testi,

Aseton ve formalin ile muamele edilmiş takizoidlerin farklı aglütinasyon vermesi,

Akut dönemden kronik döneme ilerledikçe *T. gondii* yüzey antijenlerindeki değişikliklere bağlı olarak, farklı IgG profillerinin gelişmesi



Akut infeksiyonu olan hasta serumları hem AC hem de HS ile aglütinasyon verir,
İnfeksiyonun üzerinden zaman geçtikçe AC titreleri düşer, HS yükselir.



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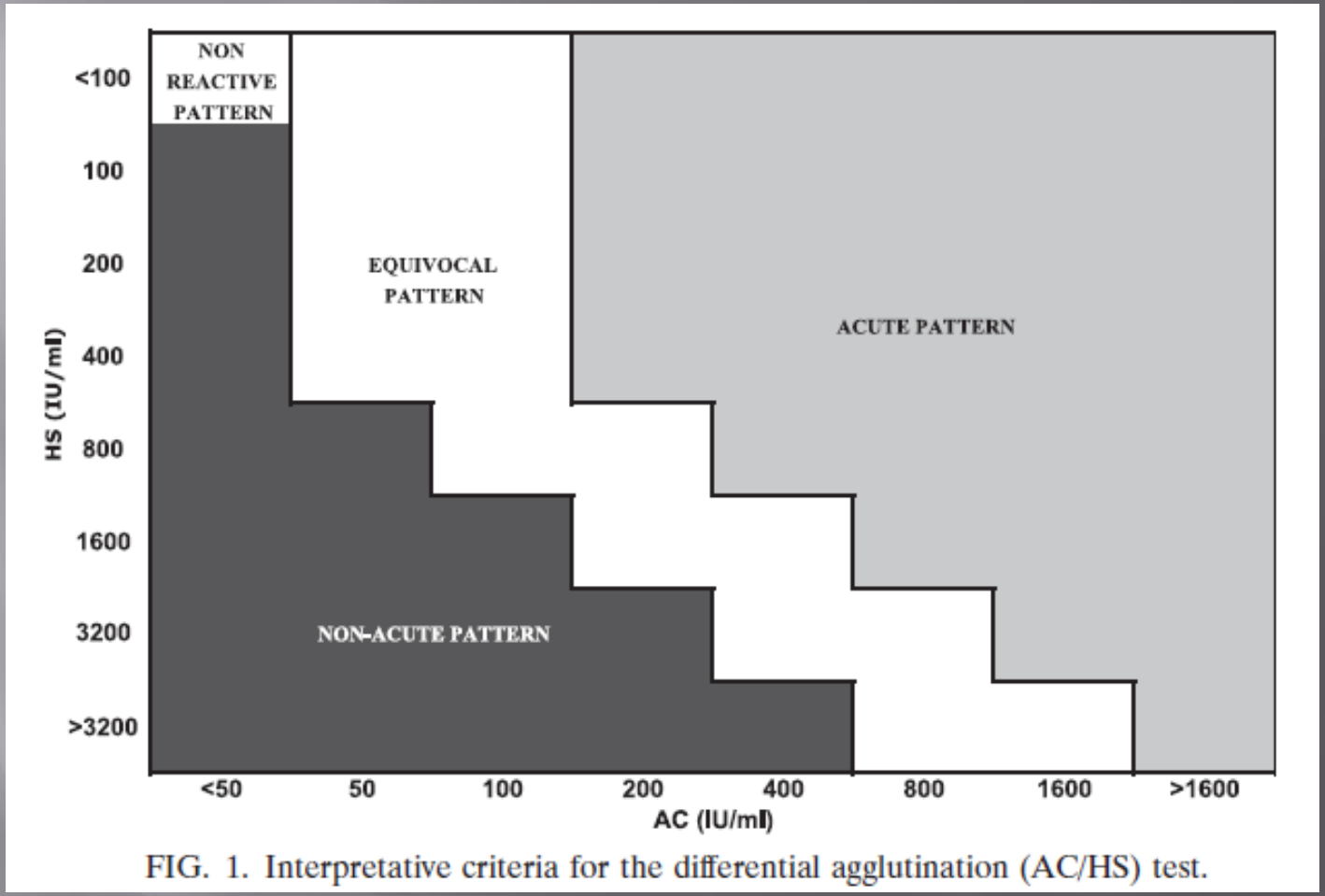

FIG. 1. Interpretative criteria for the differential agglutination (AC/HS) test.

AC/HS testi

Akut
Sınırda
Non-akut
Non-reaktif paternler

JOURNAL OF CLINICAL MICROBIOLOGY, May 2007, p. 1463–1468 Vol. 45, No. 5
0095-1137/07/$08.00+0 doi:10.1128/JCM.01781-06

The Differential Agglutination Test as a Diagnostic Aid in Cases of Toxoplasmic Lymphadenitis▽

Jose G. Montoya,[1,2]* Andrew Berry,[1] Fernando Rosso,[1,2] and Jack S. Remington[1,2]

Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, Palo Alto, California,[1] and Department of Medicine, Division of Infectious Diseases and Geographic Medicine, Stanford University School of Medicine, Stanford, California[2]

Non-akut patern, akut infeksiyonun üzerinden en az 13 ay geçtiğini düşündürür.

Yüksek avidite testi ise akut infeksiyonun üzerinden 3-5 ay geçtiğini düşündürür.

13 ay sınırının gebelerde kullanımı konusunda çalışmalara ihtiyaç var…

IgG avidite testi

Avidite=Fonksiyonel afinite,

"Farklı" antikor popülasyonlarının antijeni bağlama gücünü ifade eder.

Spesifik IgG antikorlarının fonksiyonel afinitesi, başlangıçta düşüktür,

B lenfosit seleksiyonu ile, izleyen haftalar-aylar içerisinde yükselir.

T. gondii ile akut infeksiyon sonrasında yüksek aviditeli antikorlar 3-5 ay içinde ortaya çıkar

IgG avidite testi

üre gibi protein denatüre edici ajanlar kullanılarak, antijen-antikor kompleksleri ayrıştırılır.

Sonuçta, düşük aviditeli antikorlar tamamen çözünür/Ag'den ayrılırlarken, yüksek aviditeli antikorlar bağlı kalmaya devam ederler.

Effect of Testing for IgG Avidity in the Diagnosis of *Toxoplasma gondii* Infection in Pregnant Women: Experience in a US Reference Laboratory

Oliver Liesenfeld,[1,2,3] Jose G. Montoya,[1,2] Sandra Kinney,[1] Cynthia Press,[1] and Jack S. Remington[1,2]

[1]Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, Palo Alto, and [2]Division of Infectious Diseases and Geographic Medicine, Department of Medicine, Stanford University School of Medicine, Stanford, California; [3]Department of Medical Microbiology and Immunology of Infection, Institute for Infection Medicine, Benjamin Franklin Medical Center, Free University of Berlin, Berlin, Germany

Table 3. Comparison of IgG avidity test and differential agglutination (AC/HS) test results in 125 serum samples taken from pregnant women during the first trimester.

	AC/HS test result		
Avidity result	Acute (n = 33)	Equivocal (n = 53)	Nonacute (n = 39)
Low	17 (51.5)	4 (7.5)	0
Borderline	12 (36.4)	18 (34.0)	2 (5.1)
High	4 (12.1)	31 (58.5)	37 (94.9)

NOTE. Data are no. (%) of serum samples. For further explanation of the AC/HS test, see figure 1.

AC/HS testi ile IgG avidite testi sonuçları birbirleriyle örtüşmektedir.

Effect of Testing for IgG Avidity in the Diagnosis of *Toxoplasma gondii* Infection in Pregnant Women: Experience in a US Reference Laboratory

Oliver Liesenfeld,[1,2,3] Jose G. Montoya,[1,2]
Sandra Kinney,[1] Cynthia Press,[1]
and Jack S. Remington[1,2]

[1]*Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, Palo Alto, and* [2]*Division of Infectious Diseases and Geographic Medicine, Department of Medicine, Stanford University School of Medicine, Stanford, California;* [3]*Department of Medical Microbiology and Immunology of Infection, Institute for Infection Medicine, Benjamin Franklin Medical Center, Free University of Berlin, Berlin, Germany*

İlk trimesterda yüksek avidite sonucu, fetal infeksiyon olasılığını dışlayabilir mi?

Gebeliğin başlangıcında edinilmiş infeksiyona bağlı konjenital bulaş olasılığı sıfıra yakındır.

Effect of Testing for IgG Avidity in the Diagnosis of *Toxoplasma gondii* Infection in Pregnant Women: Experience in a US Reference Laboratory

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[1]Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, Palo Alto, and [2]Division of Infectious Diseases and Geographic Medicine, Department of Medicine, Stanford University School of Medicine, Stanford, California; [3]Department of Medical Microbiology and Immunology of Infection, Institute for Infection Medicine, Benjamin Franklin Medical Center, Free University of Berlin, Berlin, Germany

İlk trimesterda yüksek avidite sonucu;

hasta izlemi ihtiyacını,

amniyotik sıvıda PCR incelemesini,

annede spiramisin tedavisini,

hastanın anksiyetesini,

maliyeti azaltır.

Effect of Testing for IgG Avidity in the Diagnosis of *Toxoplasma gondii* Infection in Pregnant Women: Experience in a US Reference Laboratory

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Sandra Kinney,[1] Cynthia Press,[1]
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İlk trimesterda IgG avidite testi, yeni edinilmiş *T. gondii* infeksiyonunun dışlanması için değerli bir doğrulama testidir.

JOURNAL OF CLINICAL MICROBIOLOGY, July 2002, p. 2504–2508 Vol. 40, No. 7
0095-1137/02/$04.00+0 DOI: 10.1128/JCM.40.7.2504–2508.2002

VIDAS Test for Avidity of *Toxoplasma*-Specific Immunoglobulin G for Confirmatory Testing of Pregnant Women

Jose G. Montoya,[1,2]* Oliver Liesenfeld,[1]† Sandra Kinney,[1] Cynthia Press,[1] and Jack S. Remington[1,2]

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VIDAS Toxo IgG avidite kiti ile yüksek avidite, son 4 ay içindeki infeksiyonu dışlar.

IgA Antibodies for Diagnosis of Acute Congenital and Acquired Toxoplasmosis

Pamela Stepick-Biek, Philippe Thulliez, Fausto G. Araujo, and Jack S. Remington

From the Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, and Division of Infectious Diseases, Department of Medicine, Stanford University School of Medicine, Stanford, California; and Laboratoire de Serologie Neonatale et de Recherche sur la Toxoplasmose, Institut de Puericulture de Paris, France

An ELISA for IgA toxoplasma antibodies was positive in 12 pregnant women who seroconverted during gestation. Positive IgA titers were also noted in 10 individuals with biopsy-proven toxoplasmic lymphadenitis; the highest titers were noted in the first months following onset of clinical signs. Toxoplasma IgA antibodies were also demonstrable in 8 of 9 infants/fetuses with congenital toxoplasma infection. In some, IgM antibodies could not be demonstrated. Among 20 patients with AIDS and biopsy-proven toxoplasmic encephalitis, only 1 had IgA antibodies. None of 20 individuals with chronic toxoplasma infection had demonstrable IgA antibodies. Demonstration of IgA toxoplasma antibodies should be useful for diagnosis of recently acquired infection and for diagnosis of the infection in the fetus and newborn.

T. gondii IgA antikorları

akut infeksiyonun gösterilmesinde,
fetüs ve yenidoğanda tanıda önemli,
duyarlılıkları IgM testlerinden daha iyi.

JOURNAL OF CLINICAL MICROBIOLOGY, Nov. 1993, p. 2952–2959
0095-1137/93/112952-08$02.00/0

Vol. 31, No. 11

Role of Specific Immunoglobulin E in Diagnosis of Acute Toxoplasma Infection and Toxoplasmosis

SIN YEW WONG,[1,2] MARIE-PAULE HAJDU,[1] RAYMUND RAMIREZ,[1] PHILIPPE THULLIEZ,[3] RIMA McLEOD,[4] AND JACK S. REMINGTON[1,2]*

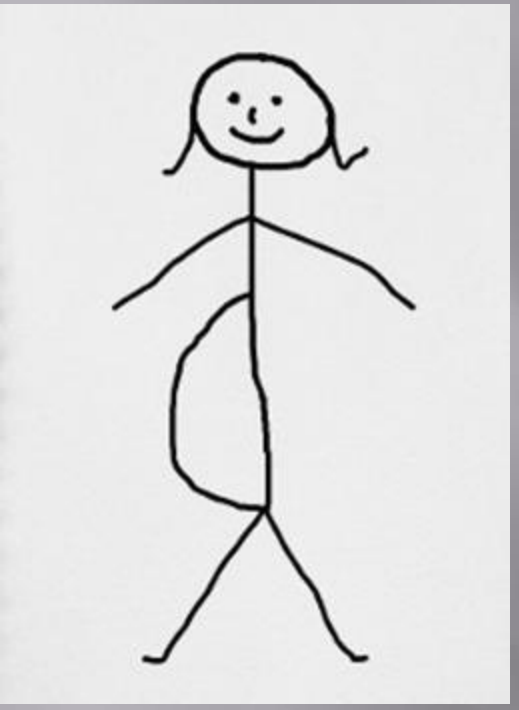
Department of Immunology and Infectious Diseases, Research Institute, Palo Alto Medical Foundation, Palo Alto, California 94301[1]; Division of Infectious Diseases and Geographic Medicine, Department of Medicine, Stanford University School of Medicine, Stanford, California 94305[2]; Laboratorie de la Toxoplasmose, Institut de Puericulture de Paris, Paris, France[3]; and Division of Infectious Diseases, Department of Medicine, Michael Reese Medical Center, Chicago, Illinois 60616, Pritzker School of Medicine, University of Chicago, Chicago, Illinois, 60637, and University of Illinois at Chicago, Chicago, Illinois 60612[4]

T. gondii IgE antikorları

Akut infeksiyon tanısında önemli,

IgM ve IgA'dan daha kısa süre pozitif kalır.

Toksoplazmozun serolojik tanısında hiçbir test “mükemmel” değildir ve bu testler birlikte kullanılmalıdır.



Olgu

32 yaşında,
12 haftalık gebe,
Primigravid,
Antenatal izleminde özellik yok,
Herhangi bir yakınması yok,
T. gondii IgM (+), IgG (+),
IgG avidite düşük.

JOURNAL OF CLINICAL MICROBIOLOGY, July 2002, p. 2504–2508 Vol. 40, No. 7
0095-1137/02/$04.00+0 DOI: 10.1128/JCM.40.7.2504–2508.2002

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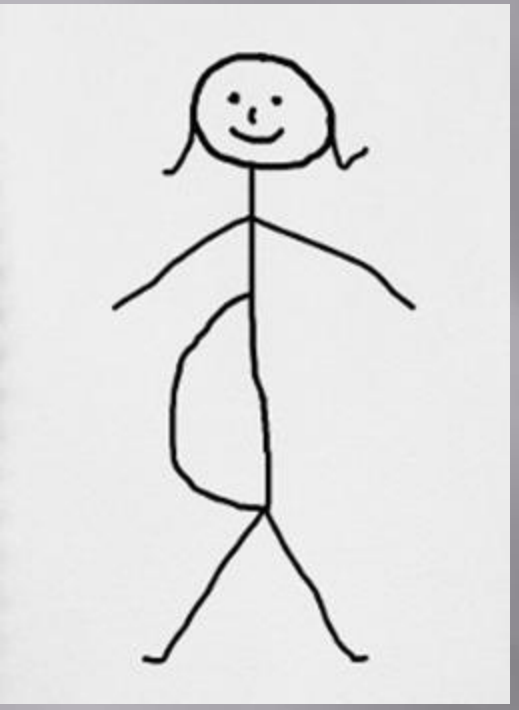
Kimi hastalarda düşük aviditeli antikorların aylarca, hatta bir yıldan uzun süre saptanabilmesi nedeniyle, avidite testi yeni edinilmiş infeksiyon tanısı için güvenilir değildir.

Avidite testi, düşük ya da sınırda sonuçların yanlış değerlendirilmesi olasılığı nedeniyle, IgM / IgG pozitif gebelerde “tek” doğrulama testi olarak kullanılmamalıdır.



Olgu

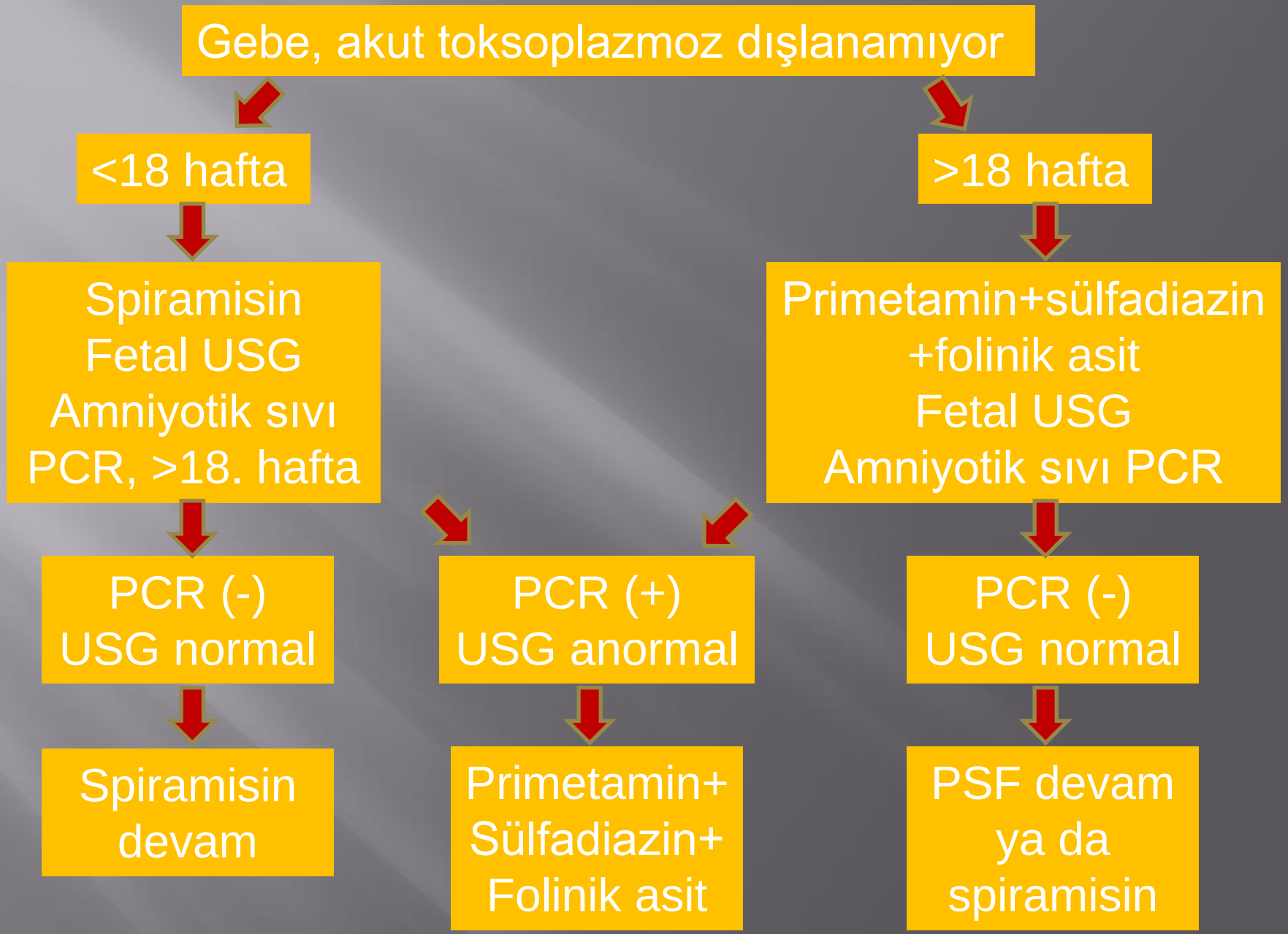
T. gondii IgM (+), IgG (+),
IgG avidite düşük.

Tedavi

Fetal tanı

Amniyotik sıvı PCR

USG



Montoya JG Clin Infect Dis 2008;47:554

PRENATAL DIAGNOSIS OF CONGENITAL TOXOPLASMOSIS WITH A POLYMERASE-CHAIN-REACTION TEST ON AMNIOTIC FLUID

PATRICK HOHLFELD, M.D., FERNAND DAFFOS, M.D., JEAN-MARC COSTA, PH.D., PHILIPPE THULLIEZ, M.D., FRANÇOIS FORESTIER, PH.D., AND MICHEL VIDAUD, PH.D.

Abstract *Background.* Congenital infection with *Toxoplasma gondii* can produce serious sequelae. However, there is little consensus about screening during pregnancy, and the tests used to establish a prenatal diagnosis of toxoplasmosis are complex and slow. We evaluated a simpler approach that is based on a polymerase-chain-reaction (PCR) test.

Methods. Prenatal diagnostic tests, including ultrasonography, amniocentesis, and fetal-blood sampling, were performed in 2632 women with *T. gondii* infection acquired during pregnancy. In 339 consecutive women, a competitive PCR test for *T. gondii* was performed on amniotic fluid, and its results were compared with those of conventional diagnostic tests. The PCR test targets the *B1* gene of *T. gondii,* uses an internal control, and can be completed in a day. Positive tests were confirmed by serologic testing of newborns or by autopsy in terminated pregnancies.

Results. Overall, the risk of fetal infection was 7.4 percent, but it increased sharply with gestational age. Congenital infection was demonstrated in 34 of 339 fetuses by conventional methods, and the PCR test was positive in all 34. In three other fetuses, only the PCR test gave positive results, and follow-up testing confirmed the presence of congenital toxoplasmosis. The PCR test gave one false negative result but no false positive results. The PCR test performed better than conventional parasitologic methods (sensitivity, 97.4 percent vs. 89.5 percent; negative predictive value, 99.7 percent vs. 98.7 percent).

Conclusions. For the prenatal diagnosis of congenital *T. gondii* infection, an approach based on a PCR test performed on amniotic fluid is rapid, safe, and accurate. (N Engl J Med 1994;331:695-9.)

Amniyotik sıvıda *T. gondii* DNA PCR

optimal zaman gebeliğin 18. haftası,

akut infeksiyonun üzerinden en az 4

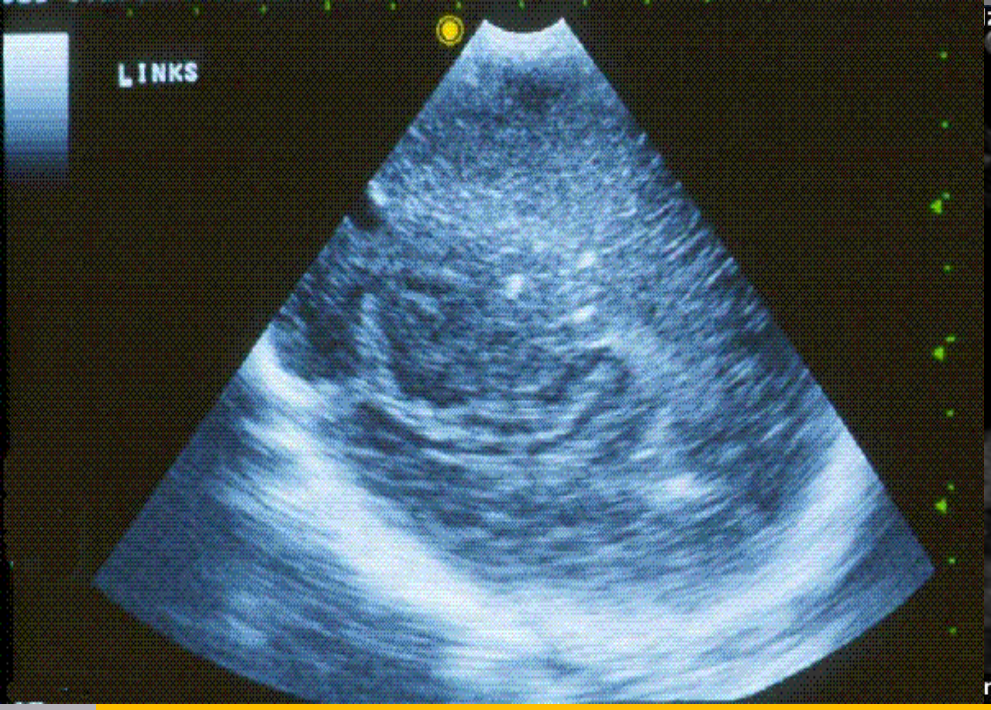
hafta geçmeli…

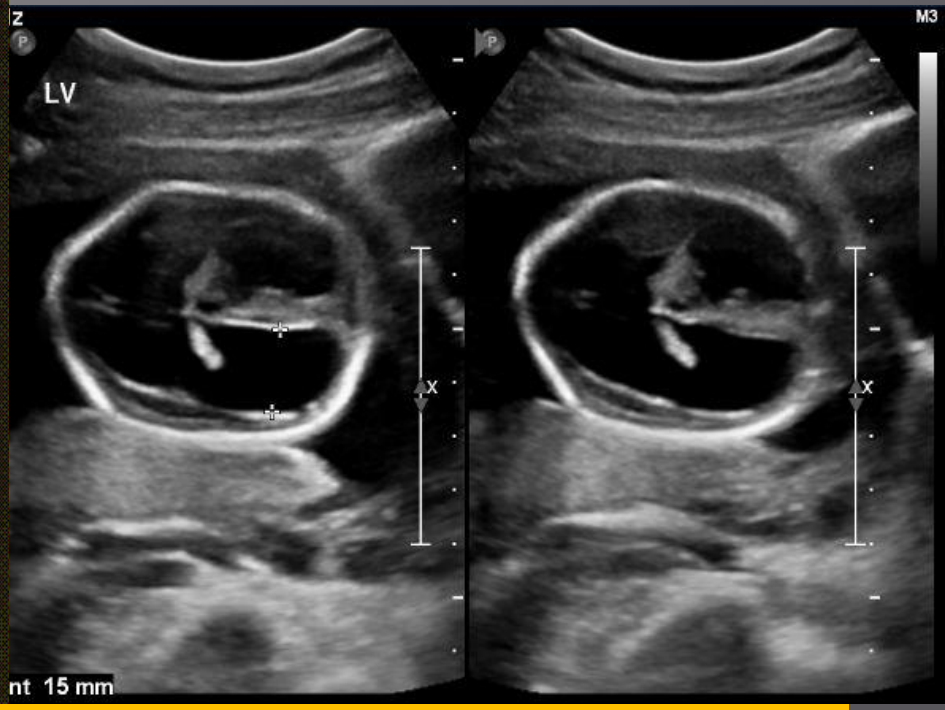
Amniyotik sıvıda *T. gondii* DNA PCR

duyarlılık %64-92
özgüllük %100
npd %88-99
ppd %100

Hohlfeld P N Engl J Med 1994;331:695

Romand S Obstet Gynecol 2001;97:296





USG

bulgular genellikle özgül değildir,

intrakraniyal hiperekojen odak ya da kalsifikasyonlar,

bilateral, simetrik ventriküler dilatasyon,

intrahepatik dansiteler, asit,

plasental kalınlaşma, hiperdensite

Spiramisin

3x1 gr/gün,

kimi çalışmalarda bulaşı %60 azalttığı bildirilmiş,

plasentayı iyi geçmez, fetal infeksiyonun tedavisi için uygun değildir,

amniyotik sıvı PCR (-) olsa dahi, doğuma dek kullanılmalıdır.

Primetamin

en etkili antitoksoplazma ajan,
folik asit antagonisti,
doz ilişkili kemik iliği süpresyonu,
teratojenik potansiyel,
2x50 mg/gün 2 gün yükleme, 50 mg/gün

Sülfadiazin

primetamin ile sinerjistik etki,
75 mg/kg yükleme, 2x50 mg/gün (max 4 gr)

Folinik asit

kemik iliği süpresyonunu önler,
10-20 mg/gün

BJOG: an International Journal of Obstetrics and Gynaecology
February 2003, Vol. 110, pp. 112–120

Effect of timing and type of treatment on the risk of mother to child transmission of *Toxoplasma gondii*

European Multicentre Study on Congenital Toxoplasmosis*

Participants are listed on page 119

Objective To determine the effects on mother to child transmission of the timing and type of prenatal treatment, taking into account gestational age at maternal seroconversion.

Design Prospective cohort study.

Setting European centres offering prenatal screening for toxoplasmosis.

Population Children born to a cohort of pregnant women with toxoplasma infection.

Methods We determined the effects on mother to child transmission of the interval between seroconversion and start of treatment (treatment delay), and the type of treatment, taking into account gestational age at maternal seroconversion.

Prenatal tedavide kullanılan ilacın ya da tedaviye başlama zamanının anneden fetüse bulaş riskine etkisi yoktur.

Effectiveness of prenatal treatment for congenital toxoplasmosis: a meta-analysis of individual patients' data

*The SYROCOT (Systematic Review on Congenital Toxoplasmosis) study group**

Summary

Background Despite three decades of prenatal screening for congenital toxoplasmosis in some European countries, uncertainty remains about the effectiveness of prenatal treatment.

Methods We did a systematic review of cohort studies based on universal screening for congenital toxoplasmosis. We did a meta-analysis using individual patients' data to assess the effect of timing and type of prenatal treatment on mother-to-child transmission of infection and clinical manifestations before age 1 year. Analyses were adjusted for gestational age at maternal seroconversion and other covariates.

Findings We included 26 cohorts in the review. In 1438 treated mothers identified by prenatal screening, we found weak evidence that treatment started within 3 weeks of seroconversion reduced mother-to-child transmission compared with treatment started after 8 or more weeks (adjusted odds ratio [OR] 0·48, 95% CI 0·28–0·80; p=0·05). In 550 infected liveborn infants identified by prenatal or neonatal screening, we found no evidence that prenatal treatment significantly reduced the risk of clinical manifestations (adjusted OR for treated *vs* not treated 1·11, 95% CI 0·61–2·02). Increasing gestational age at seroconversion was strongly associated with increased risk of mother-to-child transmission (OR 1·15, 95% CI 1·12–1·17) and decreased risk of intracranial lesions (0·91, 0·87–0·95), but not with eye lesions (0·97, 0·93–1·00).

Lancet 2007; 369: 115–22

*Members listed at end of report

Correspondence to:
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rodolphe.thiebaut@isped.u-bordeaux2.fr

26 kohort çalışma,
1745 infekte anne,
1438 tedavi alan olgu

Effectiveness of prenatal treatment for congenital toxoplasmosis: a meta-analysis of individual patients' data

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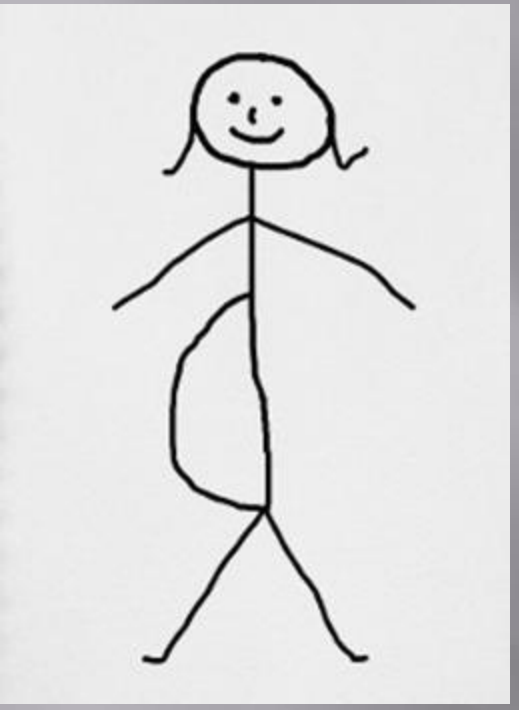
rodolphe.thiebaut@isped.u-bordeaux2.fr

Serokonversiyondan sonra 3 hafta içinde başlanan tedavi, bulaşı azaltmaktadır.

Gebelik sırasında tedavi edilen annelerin bebeklerinde ciddi nörolojik sekel ve postnatal ölümde azalma vardır.

Mevcut çalışmaların hiçbiri klinik fayda olasılığını tamamen dışlamaz,
Özellikle yeni çalışmalarda erken tedavinin yararı gösterilmiştir,

Akut *T. gondii* infeksiyonu olasılığı yüksek olan gebelerde spiramisin ya da primetamin+sülfadiazin tedavisi önerilmeye devam edilmektedir.



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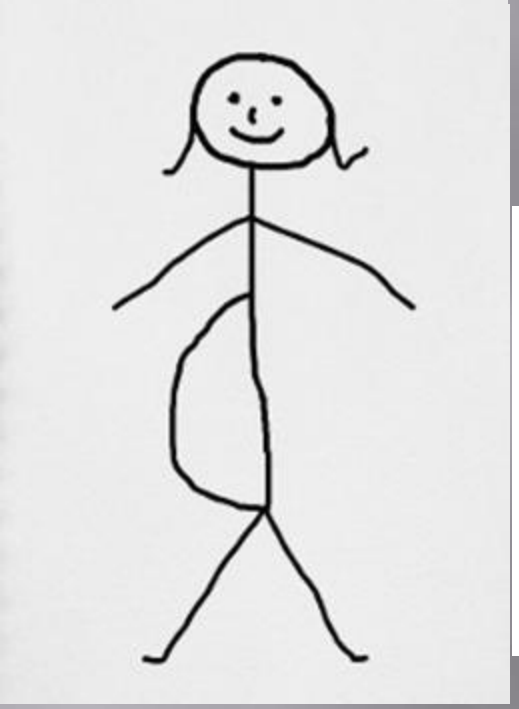
Primigravid,
Antenatal izleminde özellik yok,
Herhangi bir yakınması yok,
T. gondii IgM (+), IgG (+),
IgG avidite düşük.

Spiramisin 3x1 gr/gün, doğuma dek,
18. haftada amniyosentez, PCR (-),
Fetal USG normal.



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Antenatal izleminde özellik yok,
Herhangi bir yakınması yok,
T. gondii IgM (+), IgG (+),
IgG avidite düşük.

Sonuç olarak,

gebelerde IgM pozitifliği her zaman yeni edinilmiş infeksiyon anlamına gelmez,

düşük IgG aviditesi her zaman yeni edinilmiş infeksiyon anlamına gelmez,

18. haftadan sonra amniosentez ve *T. gondii* DNA PCR ile USG izlemi önemlidir,

yeni edinilmiş infeksiyonun dışlanamadığı gebelerde tedavi planlanmalıdır.