HIV ve Gebelik

Dr. Figen Kaptan
İKÇÜ Atatürk Eğitim ve Araştırma Hastanesi

http://www.unaids.org/en/resources/fact-sheet

People living with HIV

- In 2016, there were 36.7 million [30.8 million–42.9 million] people living with HIV.
  - 34.5 million [28.8 million–40.2 million] adults
  - 17.8 million [15.4 million–20.3 million] women (15+ years)
  - 2.1 million [1.7 million–2.6 million] children (<15 years)

People living with HIV accessing antiretroviral therapy

- As of June 2017, 20.9 million [18.4 million–21.7 million] people living with HIV were accessing antiretroviral therapy, up from 17.1 million [15.1 million–17.8 million] in 2015 and 7.7 million [6.8 million–8.0 million] in 2010.
- In 2016, around 53% [39–65%] of all people living with HIV had access to treatment.
  - Some 54% [40–65%] of adults aged 15 years and older living with HIV had access to treatment, but just 43% [30–54%] of children aged 0–14 years had access.
- In 2016, around 76% [60–88%] of pregnant women living with HIV had access to antiretroviral medicines to prevent transmission of HIV to their babies.

http://www.unaids.org/en/resources/fact-sheet

New HIV infections

- Worldwide, 1.8 million [1.6 million–2.1 million] people became newly infected with HIV in 2016.
- Since 2010, new HIV infections among adults declined by an estimated 11% from 1.9 million [1.6 million–2.1million] to 1.7 million [1.4 million–1.9 million] in 2016.
- New HIV infections among children declined by 47% since 2010, from 300 000 [230 000–370 000] in 2010 to 160 000 [100 000–220 000] in 2016.

DECLINES IN NEW INFECTIONS VARY BY AGE AND SEX

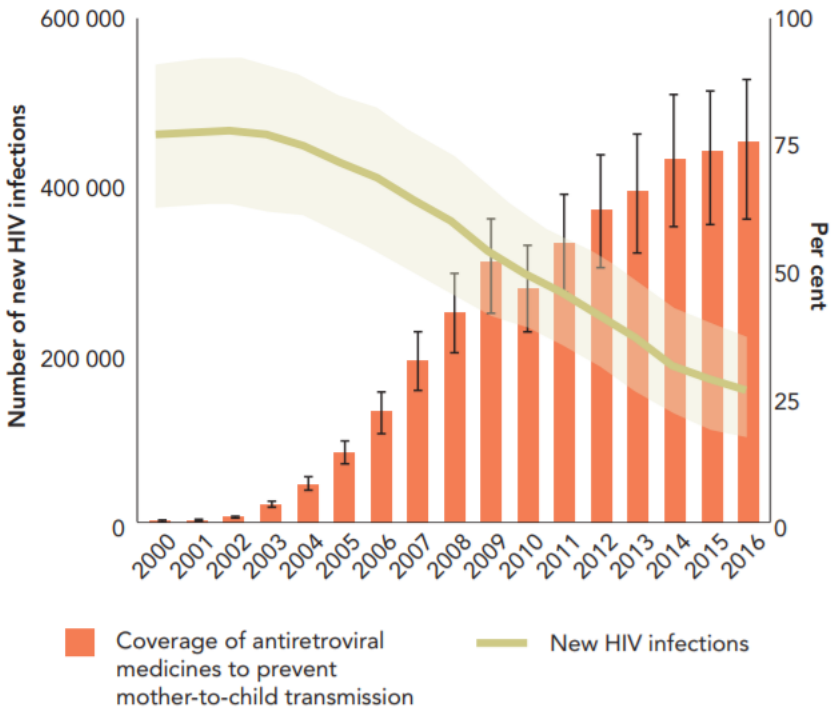


FIGURE 2.5. NEW HIV INFECTIONS AMONG CHILDREN (AGED 0–14 YEARS) AND COVERAGE OF ANTIRETROVIRAL REGIMENS TO PREVENT MOTHER-TO-CHILD TRANSMISSION, GLOBAL, 2000–2016

Source: UNAIDS 2017 estimates.

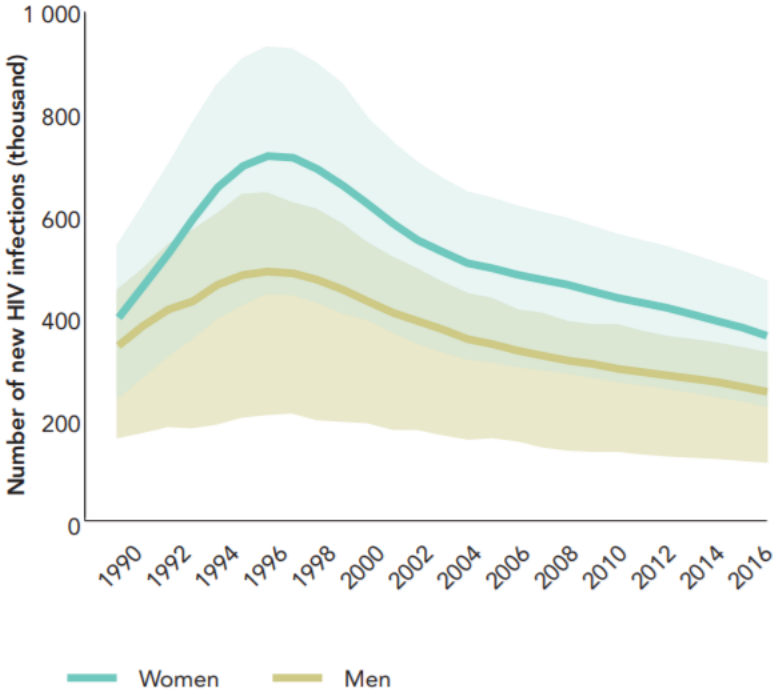


FIGURE 2.6. NEW HIV INFECTIONS, YOUNG PEOPLE (AGED 15–24 YEARS), BY SEX, GLOBAL, 1990–2016

Source: UNAIDS 2017 estimates.

HIV: Perinatal Bulaşın Önlenmesi

Centers for Disease Control and Prevention

HEDEF:

- İnsidansın <1 infeksiyon/100 000 canlı doğum olması
- HIV'e maruz kalan infantlarda oranın <%1'e indirilmesi

HIV virüsüne rağmen evlendiler, bebek istiyorlar

HIV virüsüne rağmen evlendiler, bebek istiyorlar

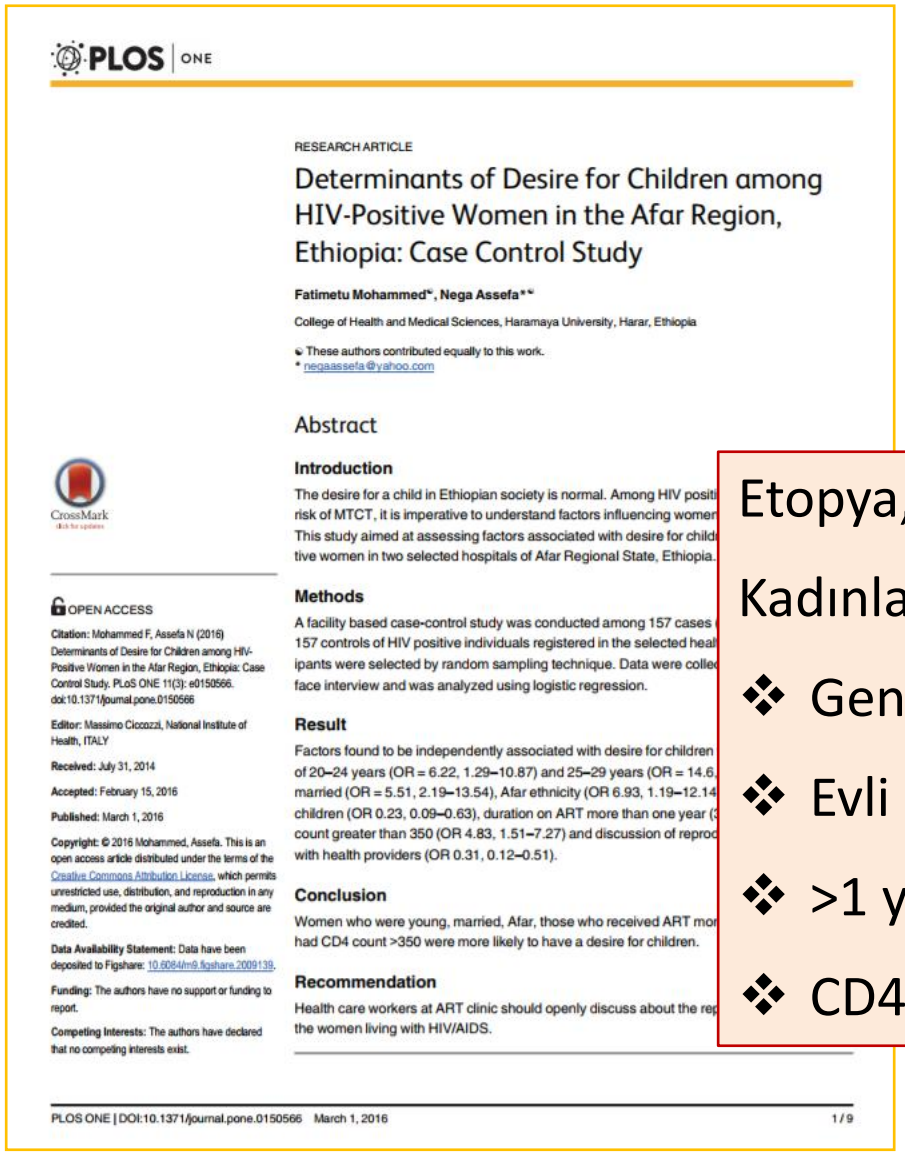
30.11.2013 - 11:00 | Güncelleme: 30.11.2013 - 11:20

> HIV virüsüne rağmen evlenen çift, hastalıkla baş edilebileceğini kanıtladı

Özlem YILMAZ/AHT

Yarın 1 Aralık Dünya AIDS Günü... Biz de size âşık iki gencin HIV virüsüyle nasıl mücadele ettiklerini hikâyesini aktaracağız. 24 yaşındaki A.Ö. İle 32 yaşındaki K.Ö. geçen yaz birbirlerine âşık oldu ve evlenmeye karar verdi. Evlilik için rutin testleri yaptıran A.Ö.'nün, HIV pozitif olduğunu öğrenince dünyası karardı. İkinci test de HIV'i gösterdi. Ticaretle uğraşan nişanlısı K.Ö.'nün testi ise negatif çıktı. 24 yaşındaki genç kız, AIDS hastalığına yakalanıp öleceğini düşündü. Nişanlısı K.Ö. ise hastalığın kendisine bulaşabileceği düşüncesiyle nişanlısından ayrılma kararı aldı. Ne yapacağını bilmeyen genç kız, internetten bulduğu Pozitif Yaşam Derneği'ne gitti ve HIV pozitifle uzun yıllar yaşayabileceğini, hastalığın tedavisi olduğunu öğrendi. Dernek yetkilileri, nişanlısı K.Ö.'ye de cinsel ilişki sırasında korundukları sürece hastalığın kendisine geçmeyeceğini anlattı.

Çift 20 Ekim'de evlendi, şimdi çocuk sahibi olmak istiyor. A.Ö., "Çok mutlu olduğum o dönem, HIV pozitif olduğumu öğrenince yıkıldım. Ayrılma aşamasına geldik. Günde 2 ilaç kullanarak, normal hayatıma devam ediyorum. Çocuk sahibi olmayı düşünüyoruz" dedi. Eşi K.Ö. ise "Hastalık bana bulaşacak diye çok korktum. Korkularım yersizmiş. Değerleri uygun seviyeye gelince çocuk için adım atabileceğiz. Ailemizin bu durumdan haberi yok" diye konuştu.



PLOS ONE

RESEARCH ARTICLE

Determinants of Desire for Children among HIV-Positive Women in the Afar Region, Ethiopia: Case Control Study

Fatimetu Mohammed[☯], **Nega Assefa***[☯]

College of Health and Medical Sciences, Haramaya University, Harar, Ethiopia

☯ These authors contributed equally to this work.
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Abstract

Introduction

The desire for a child in Ethiopian society is normal. Among HIV positi
risk of MTCT, it is imperative to understand factors influencing women
This study aimed at assessing factors associated with desire for child
tive women in two selected hospitals of Afar Regional State, Ethiopia.

Methods

A facility based case-control study was conducted among 157 cases
157 controls of HIV positive individuals registered in the selected heal
ipants were selected by random sampling technique. Data were colle
face interview and was analyzed using logistic regression.

Result

Factors found to be independently associated with desire for children
of 20–24 years (OR = 6.22, 1.29–10.87) and 25–29 years (OR = 14.6,
married (OR = 5.51, 2.19–13.54), Afar ethnicity (OR 6.93, 1.19–12.14
children (OR 0.23, 0.09–0.63), duration on ART more than one year (
count greater than 350 (OR 4.83, 1.51–7.27) and discussion of reproc
with health providers (OR 0.31, 0.12–0.51).

Conclusion

Women who were young, married, Afar, those who received ART mor
had CD4 count >350 were more likely to have a desire for children.

Recommendation

Health care workers at ART clinic should openly discuss about the rep
the women living with HIV/AIDS.

OPEN ACCESS

Citation: Mohammed F, Assefa N (2016) Determinants of Desire for Children among HIV-Positive Women in the Afar Region, Ethiopia: Case Control Study. PLoS ONE 11(3): e0150566. doi:10.1371/journal.pone.0150566

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Competing Interests: The authors have declared that no competing interests exist.

Etopya, olgu-kontrol çalışması

Kadınlarda çocuk sahibi olma isteği:

- Genç (20-24 ve 25-29 yaş grupları)
- Evli
- >1 yıldır ART alıyor
- CD4 >350 ise daha yüksek

World Journal of AIDS, 2011, 1, 198-207
doi:10.4236/wja.2011.14029 Published Online December 2011 (http://www.SciRP.org/journal/wja)

Scientific Research

Determinants of Fertility Desires among HIV Positive Women Living in the Western Highlands Province of Papua New Guinea

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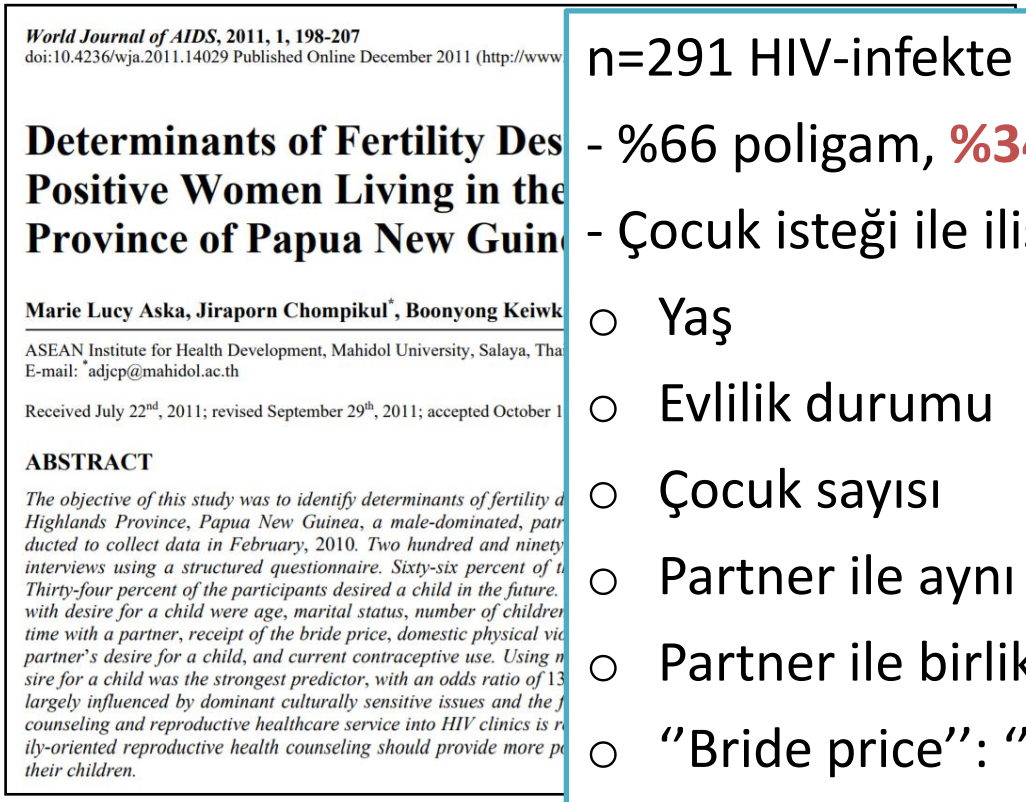
Received July 22nd, 2011; revised September 29th, 2011; accepted October 11th, 2011.

ABSTRACT

The objective of this study was to identify determinants of fertility desires in HIV positive women living in the Western Highlands Province, Papua New Guinea, a male-dominated, patrimonial society. A cross-sectional study was conducted to collect data in February, 2010. *Two hundred and ninety one HIV-infected women participated in personal interviews using a structured questionnaire. Sixty-six percent of the respondents were in polygamous relationships. Thirty-four percent of the participants desired a child in the future. Chi-square tests revealed that variables associated with desire for a child were age, marital status, number of children, current co-habitation with a partner, duration of time with a partner, receipt of the bride price, domestic physical violence, sexual activity in the previous three months, partner's desire for a child, and current contraceptive use. Using multiple logistic regression, a partner's positive desire for a child was the strongest predictor, with an odds ratio of* 13.04 (95% *CI* = 5.68 - 29.91). *Fertility desires were largely influenced by dominant culturally sensitive issues and the family-oriented culture. The integration of effective counseling and reproductive healthcare service into HIV clinics is recommended. Holistic, culturally-relevant and family-oriented reproductive health counseling should provide more positive outcomes for both HIV-infected women and their children.*



World Journal of AIDS, 2011, 1, 198-207
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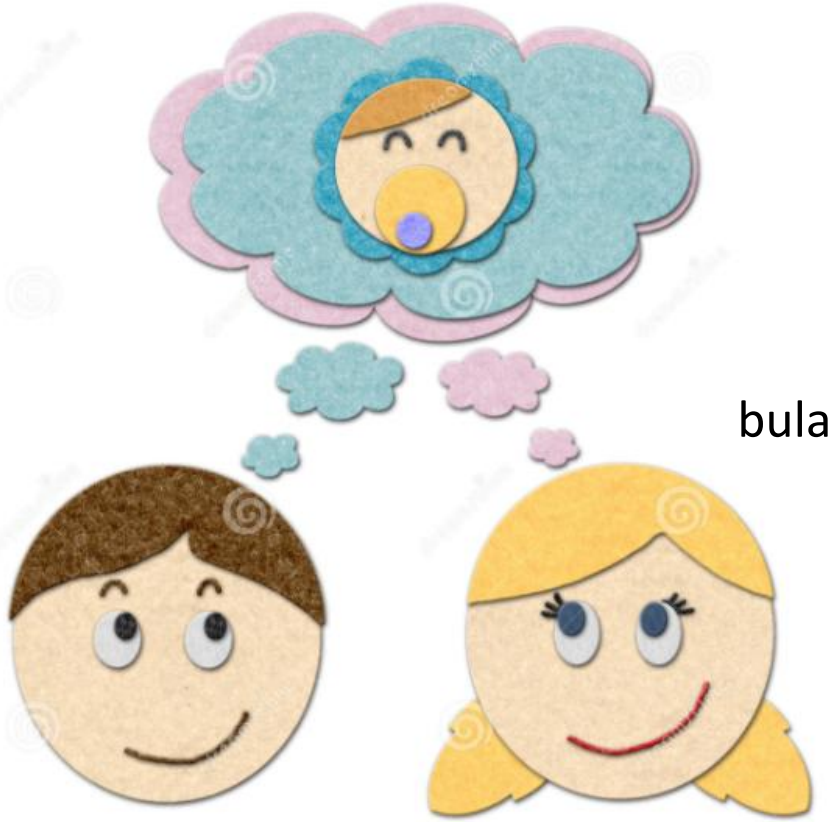
ily-oriented reproductive health counseling should provide more p
their children.

n=291 HIV-infekte kadın, anket çalışması

- %66 poligam, **%34** çocuk istiyor
- Çocuk isteği ile ilişkili değişkenler:
  - Yaş
  - Evlilik durumu
  - Çocuk sayısı
  - Partner ile aynı evde yaşama
  - Partner ile birlikte olma süresi
  - ''Bride price'': ''Başlık parası''
  - Fiziksel şiddet
  - Önceki 3 ay içinde cinsel aktivite
  - **Eşin çocuk sahibi olma isteği***
    - Pozitif ise OR: 13.04 (95% CI = 5.68 - 29.91)
  - Kontraseptif kullanıyor olmak

Chi-square test. * Multiple logistic regression.



Bebek:
Perinatal
bulaşın önlenmesi

Güvenli cinsel yaşam, alkol, sigara, madde kullanımı
Gebelik istenmiyorsa uygun ve etkili kontraseptif yöntem*
Serolojik olarak uyumsuz eşler arasında bulaşın önlenmesi
Eşlerin ikisi de HIV+ ise süperinfeksiyonun önlenmesi
* ARV ilaç ile hormonlar arasında ilaç-ilaç etkileşimi

Güncelleme: 14.11.2017

Recommendations for the Use of Antiretroviral Drugs in Pregnant Women with HIV Infection and Interventions to Reduce Perinatal HIV Transmission in the United States

Downloaded from https://aidsinfo.nih.gov/guidelines on 11/27/2017

Panel's Recommendations

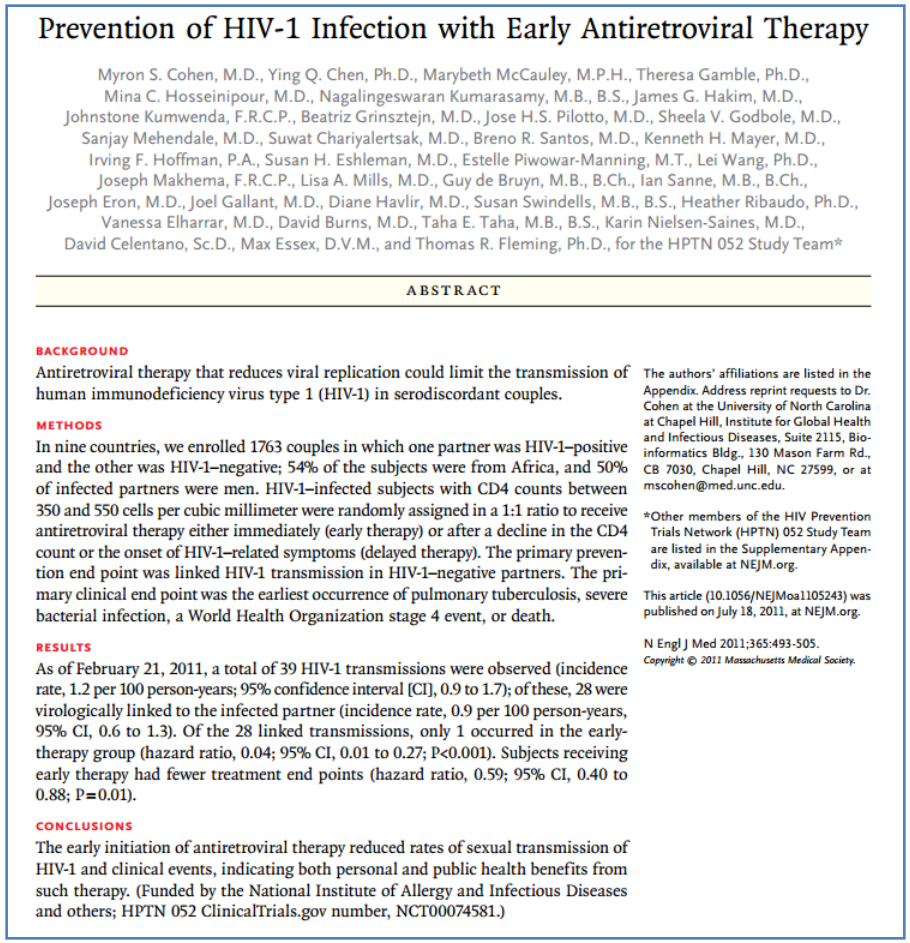
For Couples Who Want to Conceive When One or Both Partners are Living with HIV:

- Expert consultation is recomm
  needs **(AIII)**.
- Partners should be screened a
  conceive **(AII)**.
- Partners living with HIV infecti
  attempting conception to preve
  HIV, to minimize the risk of HIV
- For couples with differing HIV s
  insemination at home or in a pr
  ovulatory period is recommend
  transmission to the partner wit
- For couples with differing HIV s
  sperm from a man who is HIV-u
  eliminates the risk of HIV trans
- For couples with differing HIV s
  achieved sustained viral suppr
  to 3 days before and the day of
  very low risk of sexual HIV tran
- For couples with differing HIV s
  a condom (despite counseling)
  achieve viral suppression or wh
  of antiretroviral pre-exposure p
  to reduce the risk of sexual tra
  limit sex (without condoms) to
- For couples with differing HIV s
  condom limited to peak fertility
  suppression, it is unclear whet
  reduces the risk of sexual trans

Eşlerden biri veya her ikisi HIV infekte ise:

- Uzman konsültasyonu
- Konsepsiyon öncesi CYBH taraması ve tedavisi
- Maksimum virolojik baskılama:
  Eşe cinsel yolla bulaşın önlenmesi ve kadın HIV+ ise infanta bulaş riskini en aza indirmek için
- Kadın HIV+ ise: Eşin semeni ile yapay döllenme
- Erkek HIV+ ise: Donör spermi
- Kondomsuz ilişki:
  HIV+ eş ART alıyor, sürdürülebilir virolojik baskılanma var →
  →Ovulasyon günü ve öncesindeki 2-3 gün kondomsuz ilişki
- Temas öncesi profilaksi (PrEP):
  - Uyarılmasına rağmen HIV+ eşin virolojik baskılanması yok veya bilinmiyor iken korunmasız cinsel ilişkide bulunanlar için önerilir.
  - HIV+ eşte virolojik baskılanma sağlanmışsa: Etkinlik belirsiz

NEJM 2011



Prevention of HIV-1 Infection with Early Antiretroviral Therapy

Myron S. Cohen, M.D., Ying Q. Chen, Ph.D., Marybeth McCauley, M.P.H., Theresa Gamble, Ph.D., Mina C. Hosseinipour, M.D., Nagalingeswaran Kumarasamy, M.B., B.S., James G. Hakim, M.D., Johnstone Kumwenda, F.R.C.P., Beatriz Grinsztejn, M.D., Jose H.S. Pilotto, M.D., Sheela V. Godbole, M.D., Sanjay Mehendale, M.D., Suwat Chariyalertsak, M.D., Breno R. Santos, M.D., Kenneth H. Mayer, M.D., Irving F. Hoffman, P.A., Susan H. Eshleman, M.D., Estelle Piwowar-Manning, M.T., Lei Wang, Ph.D., Joseph Makhema, F.R.C.P., Lisa A. Mills, M.D., Guy de Bruyn, M.B., B.Ch., Ian Sanne, M.B., B.Ch., Joseph Eron, M.D., Joel Gallant, M.D., Diane Havlir, M.D., Susan Swindells, M.B., B.S., Heather Ribaudo, Ph.D., Vanessa Elharrar, M.D., David Burns, M.D., Taha E. Taha, M.B., B.S., Karin Nielsen-Saines, M.D., David Celentano, Sc.D., Max Essex, D.V.M., and Thomas R. Fleming, Ph.D., for the HPTN 052 Study Team*

ABSTRACT

BACKGROUND

Antiretroviral therapy that reduces viral replication could limit the transmission of human immunodeficiency virus type 1 (HIV-1) in serodiscordant couples.

METHODS

In nine countries, we enrolled 1763 couples in which one partner was HIV-1–positive and the other was HIV-1–negative; 54% of the subjects were from Africa, and 50% of infected partners were men. HIV-1–infected subjects with CD4 counts between 350 and 550 cells per cubic millimeter were randomly assigned in a 1:1 ratio to receive antiretroviral therapy either immediately (early therapy) or after a decline in the CD4 count or the onset of HIV-1–related symptoms (delayed therapy). The primary prevention end point was linked HIV-1 transmission in HIV-1–negative partners. The primary clinical end point was the earliest occurrence of pulmonary tuberculosis, severe bacterial infection, a World Health Organization stage 4 event, or death.

RESULTS

As of February 21, 2011, a total of 39 HIV-1 transmissions were observed (incidence rate, 1.2 per 100 person-years; 95% confidence interval [CI], 0.9 to 1.7); of these, 28 were virologically linked to the infected partner (incidence rate, 0.9 per 100 person-years, 95% CI, 0.6 to 1.3). Of the 28 linked transmissions, only 1 occurred in the early-therapy group (hazard ratio, 0.04; 95% CI, 0.01 to 0.27; P<0.001). Subjects receiving early therapy had fewer treatment end points (hazard ratio, 0.59; 95% CI, 0.40 to 0.88; P=0.01).

CONCLUSIONS

The early initiation of antiretroviral therapy reduced rates of sexual transmission of HIV-1 and clinical events, indicating both personal and public health benefits from such therapy. (Funded by the National Institute of Allergy and Infectious Diseases and others; HPTN 052 ClinicalTrials.gov number, NCT00074581.)

The authors' affiliations are listed in the Appendix. Address reprint requests to Dr. Cohen at the University of North Carolina at Chapel Hill, Institute for Global Health and Infectious Diseases, Suite 2115, Bio-informatics Bldg., 130 Mason Farm Rd., CB 7030, Chapel Hill, NC 27599, or at mscohen@med.unc.edu.

*Other members of the HIV Prevention Trials Network (HPTN) 052 Study Team are listed in the Supplementary Appendix, available at NEJM.org.

This article (10.1056/NEJMoa1105243) was published on July 18, 2011, at NEJM.org.

N Engl J Med 2011;365:493-505.

ART, serolojik olarak uyumsuz eşler arasında, cinsel yolla HIV bulaşını önleyebilir mi?

N= 1,763 HIV serolojik olarak uyumsuz eş
CD4: 350-550 hücre/mm^3
%97 heteroseksüel, %94 evli
İnfekte eşlerin %50'si erkek

Erken ART
- 886 çift
- 1 bulaş

Geç ART
- 877 çift
- 27 bulaş

%96* ↓

HPTN 052
RKÇ, 13 merkez, 9 ülke
Afrika, Asya
Kuzey ve Güney Amerika

- Bulaş 17 olguda CD4 >350 iken
- Bulaşların %82'si Afrika'da

* (HR 0.04; 95% CI, 0.01–0.27; $P < 0.001$)

Original Investigation

Sexual Activity Without Condoms and Risk of HIV Transmission in Serodifferent Couples When the HIV-Positive Partner Is Using Suppressive Antiretroviral Therapy

Alison J. Rodger, MD; Valentina Cambiano, PhD; Tina Bruun, RN; Pietro Vernazza, MD; Simon Collins; Jan van Lunzen, PhD; Giulio Maria Corbelli; Vicente Estrada, MD; Anna Maria Geretti, MD; Apostolos Beloukas, PhD; David Asboe, FRCP; Pompeyo Viciana, MD; Félix Gutiérrez, MD; Bonaventura Clotet, PhD; Christian Pradier, MD; Jan Gerstoft, MD; Rainer Weber, MD; Katarina Westling, MD; Gilles Wandeler, MD; Jan M. Prins, PhD; Armin Rieger, MD; Marcel Stoeckle, MD; Tim Kümmerle, PhD; Teresa Bini, MD; Adriana Ammassari, MD; Richard Gilson, MD; Ivanka Krznaric, PhD; Matti Ristola, PhD; Robert Zangerle, MD; Pia Handberg, RN; Antonio Antela, PhD; Sris Allan, FRCP; Andrew N. Phillips, PhD; Jens Lundgren, MD; for the PARTNER Study Group

Kondom?
Heteroseksüel
MSM

PARTNER Çalışması

Prospektif, gözlemsel 75 klinik, 14 Avrupa ülkesi, 1,166 HIV serolojik olarak uyumsuz eş

HIV+ eş ART alıyor, HIV-1 RNA <200 k/mL

Kondomsuz ilişki Eylül 2010 - Mayıs 2014

Heteroseksüel: 548; MSM: 340 çift → **Ort. 1.3 yıl izlem**

Medyan 37 kez (IQR, 15-71)/yıl kondomsuz ilişki

MSM çiftler: 22,000; heteroseksüel çiftler 36,000

11 kişide HIV bulaşı: 10 MSM; 1 heteroseksüel;

- 8 kişide başka partner ile kondomsuz ilişki

- Filogenetik ilişkili bulaş yok
- Eşler arasında HIV bulaş oranı sıfır
- Eşler arası HIV bulaş riski %95 CI üst limiti: **0.30**/100 Eş-yılı izlem;

Kondomsuz anal ilişki için **0.71**/ 100 Eş-yılı izlem

JAMA July 12, 2016 Volume 316, Number 2

HPTN 052 → devam çalışması

JAIDS Journal of Acquired Immune Deficiency Syndromes: January 1st, 2017 - Volume 74 - Issue 1 - p 112–116
doi: 10.1097/QAI.0000000000001158
Basic Science

BUY SDC

Abstract | Author Information

Abstract: HIV Prevention Trials Network 052 demonstrated that antiretroviral therapy (ART) prevents HIV transmission in serodiscordant couples. HIV from index–partner pairs was analyzed to determine the genetic linkage status of partner infections. Forty-six infections were classified as linked, indicating that the index was the likely source of the partner's infection. Lack of viral suppression and higher index viral load were associated with linked infection. Eight linked infections were diagnosed after the index started ART: 4 near the time of ART initiation and 4 after ART failure. Linked infections were not observed when the index participant was stably suppressed on ART.

ART ile HIV+ eşte sürdürülebilir virolojik baskılanma varsa eşe bulaş riski sıfıra yakın.

İspanya

Observational Study

Medicine®

OPEN

Natural conception in HIV-serodiscordant couples with the infected partner in suppressive antiretroviral therapy

A prospective cohort study

Jorge Del Romero, MD[a], María Begoña Baza, MD[a,*], Isabel Río, PhD[b], Adrián Jerónimo, MD[a], Mar Vera, MD[a], Victoria Hernando, PhD[b,c], Carmen Rodríguez, PhD[a], Jesús Castilla, MD, PhD[c,d]

Abstract

The potential of antiretroviral treatment (ART) to prevent the sexual transmission of HIV has increased the number of serodiscordant couples who are considering natural conception. We aim to describe the results of a protocol for reproductive counseling aimed at HIV serodiscordant couples who desire natural conception, in which the infected partner, the index case, is receiving suppressive antiretroviral treatment.

A prospective cohort included all HIV serodiscordant couples attended a counseling program in the period 2002 to 2013 who opted for natural conception and met the following criteria: index case on ART with persistent plasma viral suppression for at least the previous 6 months, ART compliance over 95%, preserved immune status, undetectable HIV viral and proviral load in semen in male index cases, and absence of genitourinary infections and fertility problems in both members of the couple.

Of the 161 HIV serodiscordant couples included, 133 with male index cases, 66% achieved at least 1 pregnancy, 18% a second one, and 5% a third pregnancy. A total of 144 natural pregnancies occurred and 107 babies were born. The pregnancy rate was 1.9 for each 100 acts of vaginal intercourse, and the mean time to conception was 6.1 months, both independently of the sex of the index case. No case of sexual or vertical HIV transmission occurred.

In the absence of fertility problems and under controlled conditions, natural conception might be a safe and effective reproductive method for those HIV serodiscordant couples who choose this reproductive option.

Abbreviations: ART = antiretroviral treatment, CI = confidence interval, DNA = desoxyribonucleic acid, HIV = human immunodeficiency virus, IQR = interquartile range, NA = not applicable, RNA = ribonucleic acid, SD = standard deviation, SDCs = serodiscordant couples.

Keywords: antiretroviral therapy, HIV infection, HIV transmission, natural conception, serodiscordant couples

Medicine (Baltimore). 2016;95(30):e4398.

Observational Study

Medicine

OPEN

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161 serolojik olarak uyumsuz eş
HIV+: 133'ü erkek; 38'i kadın

Serolojik olarak uyumsuz eşler arasında, eşler tercih ederse, fertilite problemi yoksa ve kontrol altındaki durumlarda, doğal yolla konsepsiyon güvenilir ve etkin bir üreme yöntemi olabilir.

En az 1 gebelik %66 → 2. gebelik %18 → 3. gebelik %5

Toplam 144 doğal yolla gebelik

107 bebek

Gebelik oranı: 1.9/100 vajinal ilişki

Konsepsiyon için geçen süre: 6.1 ay

İndeks olgunun cinsiyetinden bağımsız

Cinsel yolla veya vertikal HIV bulaşı yok

Medicine (Baltimore). 2016;95(30):e4398.

Observational Study

Medicine

OPEN

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Jorge Del Romero, MD[a], María Begoña Baza, MD[a,*], Isabel Río, PhD[b], Adrián Jerónimo, MD[a], Mar Vera, MD[a], Victoria Hernando, PhD[b,c], Carmen Rodríguez, PhD[a], Jesús Castilla, MD, PhD[c,d]

Abstract

Table 5

Reproductive results and HIV transmission in couples attempting natural reproduction.

	All couples, n (%)	HIV-infected man and HIV seronegative woman, n (%)	HIV seronegative man and HIV-infected woman, n (%)	P
Total	161	133	28	
Couples achieving pregnancy*				
First pregnancy	107 (66.5)	87 (65.4)	20 (71.4)	0.66
Second pregnancy	29 (18.0)	25 (18.8)	4 (14.3)	0.79
Third pregnancy	8 (5.0)	7 (5.3)	1 (3.6)	1
Number of unprotected coital acts	7683	6475	1208	
Number of pregnancies	144	118	26	
Rate of pregnancies per 100 unprotected coital acts (95% CI)†	1.9 (1.6–2.2)	1.8 (1.5–2.2)	2.2 (1.4–3.1)	0.42
Mean time to pregnancy, mo, mean (±SD)	6.1 (±7.5)	6.4 (±7.9)	4.3 (±4.5)	0.21
Pregnancy outcomes				0.20
Births	105 (72.9)	88 (74.6)	17 (65.4)	
Spontaneous abortion	30 (20.8)	25 (21.2)	5 (19.2)	
Voluntary interruption of pregnancy‡	4 (2.8)	2 (1.7)	2 (7.7)	
Unknown	5 (3.5)	3 (2.5)	2 (7.7)	
Number of HIV sexual transmissions	0	0	0	
HIV transmission rate per 1000 unprotected coital acts (95% CI)	0 (0.0–0.4)	0 (0.0–0.5)	0 (0.0–2.5)	NA
Number of HIV vertical transmissions	0	NA	0	

CI = confidence interval, NA = Not applicable, SD = standard deviation.

* Couples achieving a second pregnancy also achieved the first, and couples achieving the third pregnancy also achieved the second and the first.

† Nine pregnancies from 8 couples were not considered because of missing data on unprotected coital acts.

‡ Voluntary interruption of pregnancy: 2 ectopic pregnancy, 1 Down syndrome, 1 chorioamnionitis by amniocentesis.

Observational Study

Medicine

OPEN

Natural conception in HIV-serodiscordant couples with the infected partner in suppressive antiretroviral therapy

A prospective cohort study

Jorge Del Romero, MD[a], María Begoña Baza, MD[a,*], Isabel Río, PhD[b], Adrián Je
Victoria Hernando, PhD[b,c], Carmen Rodríguez, PhD[a], Jesús Castilla, MD, PhD[c,d]

Abstract

The potential of antiretroviral treatment (ART) to prevent the sexual transmission of HIV has incr
couples who are considering natural conception. We aim to describe the results of a protocol f
HIV serodiscordant couples who desire natural conception, in which the infected partner, the
antiretroviral treatment.

A prospective cohort included all HIV serodiscordant couples attended a counseling progra
opted for natural conception and met the following criteria: index case on ART with persistent pla
previous 6 months, ART compliance over 95%, preserved immune status, undetectable HIV vir
index cases, and absence of genitourinary infections and fertility problems in both members

Of the 161 HIV serodiscordant couples included, 133 with male index cases, 66% achieved
one, and 5% a third pregnancy. A total of 144 natural pregnancies occurred and 107 babies we
for each 100 acts of vaginal intercourse, and the mean time to conception was 6.1 months, both
case. No case of sexual or vertical HIV transmission occurred.

In the absence of fertility problems and under controlled conditions, natural conception might
method for those HIV serodiscordant couples who choose this reproductive option.

Abbreviations: ART = antiretroviral treatment, CI = confidence interval, DNA = deso
immunodeficiency virus, IQR = interquartile range, NA = not applicable, RNA = ribonucleic acid
serodiscordant couples.

Keywords: antiretroviral therapy, HIV infection, HIV transmission, natural conception, serod

Del Romero et al. Medicine (2016) 95:30

Table 6

Fertility-related disorders among 161 couples who opted for natural reproduction.

Disorders	N (%)
Men*	141 (100)
Astenospermia	16 (11.3)
Oligospermia	11 (7.8)
Oligoastenospermia	8 (5.7)
Oligoastenoteratospermia	2 (1.4)
Astenoteratospermia	1 (0.7)
Teratospermia	1 (0.7)
Women	161 (100)
Polycystic ovary	7 (4.3)
Uterine myoma	3 (1.9)
Adnexectomy	2 (1.2)
Hypothyroidism	2 (1.2)
Irregular menstrual cycles	2 (1.2)
Endometriosis	1 (0.6)
Cervical conization	1 (0.6)
Lupus	1 (0.6)
Primary antiphospholipid syndrome	1 (0.6)
Undefined	1 (0.6)

* Spermiograma was not available for 20 men.

%28

%13

Sci Transl Med. 2011 April 6; 3(77): 77ra29. doi:10.1126/scitranslmed.3001888.

Genital HIV-1 RNA Quantity Predicts Risk of Heterosexual HIV-1 Transmission

Jared M. Baeten, MD, PhD[1,2,3], Erin Kahle, MPH[1,3], Jairam R. Lingappa, MD, PhD[1,2,4], Robert W. Coombs, MD, PhD[2,5], Sinead Delany-Moretlwe, MD, PhD[6], Edith Nakku-Joloba, MBChB, PhD[7], Nelly R. Mugo, MBChB, MPH[1,8], Anna Wald, MD, MPH[2,3,5,9], Lawrence Corey, MD[2,3,5,9], Deborah Donnell, PhD[1,10], Mary S. Campbell, MD[2], James I. Mullins, PhD[2,5], and Connie Celum, MD, MPH[1,2,3] for the Partners in Prevention HSV/HIV Transmission Study Team

Genital HIV-RNA

Afrika, 2,521 serodiskordan çift → 1,805 endoservikal örnek + 716 semen

✓ Plazma ve genital HIV-RNA düzeyi korele

✓ Genital HIV-RNA yüksek ise, heteroseksüel bulaş riski artmakta

Plazma HIV-RNA düzeyinden bağımsız

✓ Genital HIV-RNA [ ] her 1 log ↑ ≈ Bulaş riski ↑ (1.79 – 2.20X; p<0.001)

✓ Genital HIV-RNA [ ] HIV bulaş riskini öngördürtür:

Semen için HR= 1.68; endoservikal sürüntü için HR=1.67

Diskordans!
Plazma vs Genital HIV-RNA

- Maksimum virolojik baskılanma sağlansa bile, genital traktüste virüs bulunabilir; heteroseksüel bulaş riski azalmakla birlikte tam elimine olmaz.

- 59 kadın hasta → 22'sinde plazma HIV-RNA saptanamaz düzeyde;

  ancak genital HIV-RNA pozitif Cu-Uvin S, *AIDS 2010*

- 25 erkek hasta → ART ile plazma HIV-RNA saptanamaz düzeyde
  - n=12 (%48) >1 vizitte semende HIV-RNA pozitif
  - n=4 (%16) HIV-RNA >5.000 k/mL Sheth PM, AIDS 2009

İlaçların genital traktüse geçişi arasındaki fark ???

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Ancak, çalışmada, plazma viral yük negatif iken genital traktüste HIV saptandığı durumlarda HIV bulaşı olan olgu yok….

- Mutlaka kondom kullanılması
- Maksimum viral baskılama, CYBH tedavisi
- Periovulatuvar dönemde kondomsuz ilişki
- Diskordan eş: Temas öncesi profilaksi

Kadın HIV +

En iyi yöntem yapay döllenme

Erkek HIV +

Donör spermi kullanımı

Sperm hazırlama teknikleri:

- İntra-uterin inseminasyon
- İn-vitro fertilizasyon

Pahalı
Teknik ekipman gerekir
Güncel yeri?
Öneriler ART ve PrEP öncesi
Fertilite: Yararlı

Semen analizi önerilir:

- HIV ve ART nedeniyle semen hacmi daha az
- Sperm sayısı ve motilitesi daha az
- Anormal morfolojik formlar daha sık
- Problem varsa gebelik olasılığı düşük/yok

Temas Öncesi Profilaksi*

- Serolojik olarak uyumsuz çift
- HIV negatif olana önerilir
- Kondomsuz cinsel ilişkinin fertilite dönemi ile kısıtlı olması
- HIV+ eşin virolojik baskılanması yok/bilinmiyor ise önerilir
- HIV+ eşte viral yük baskılı, diğer tüm koşullar sağlanmış: PrEP ile ek yarar?
- FDA: TDF/FTC onaylı
- Uyum!!!
- Gebelik, emzirme kontrendike değil

*PrEP: Preexposure prophylaxis

Temas Öncesi Profilaksi

CDC: **E HIV+** / **K HIV (-)**

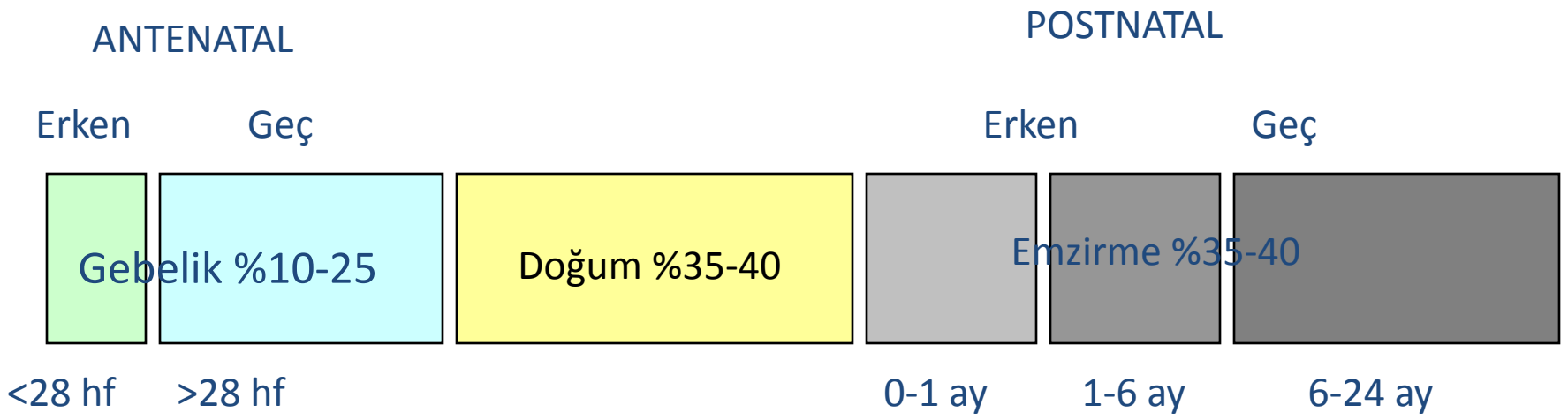
- **K HIV (-)** → Konsepsiyondan 1 ay önce TDF/FTC /gün başlanmalı
  → Konsepsiyondan 1 ay sonrasına dek devam edilmeli
- İzlem: HIV testi, renal fonksiyon testi, gebelik testi, HBV testi
- Akut HIV infeksiyonu açısından bilgilendirme
- Akut HIV infeksiyonu gelişirse profilaksinin hemen kesilmesi

N=46 heteroseksüel çift: **E HIV+** ART+ VY negatif / **K HIV (-)**

- **K HIV (-)** → 1 doz TDF: LH pik yapınca → 2. doz 24 saat sonra
- HIV bulaşı yok
- Gebelik oranı yüksek (12 deneme sonrası %75)

Vernazza PL, AIDS 2011

HIV İnfekte Anneden Bebeğe Perinatal HIV Bulaşı



ART olmadan kümülatif bulaş riski **%40-45**

ART + planlanmış sezaryen + emzirmenin önlenmesi:
Bulaş riski **%1-2**'ye inmekte

Gebelik planlayan HIV+ Kadın Hasta

ART konsepsiyon öncesi başlanmalı

No Perinatal HIV-1 Transmission From Women With Effective Antiretroviral Therapy Starting Before Conception FREE

Laurent Mandelbrot ✉; Roland Tubiana; Jerome Le Chenadec; Catherine Dollfus; Albert Faye; Emmanuelle Pannier; Sophie Matheron; Marie-Aude Khuong; Valerie Garrait; Veronique Reliquet; ... Show more

Clin Infect Dis (2015) 61 (11): 1715-1725.
DOI: https://doi.org/10.1093/cid/civ578

French Perinatal Cohort

ART başlama zamanı ≈ Bulaş oranı

- Konsepsiyon öncesi : %0.2

ART: Erken Başlanmalı

No Perinatal HIV-1 Transmission From Women With Effective Antiretroviral Therapy Starting Before Conception FREE

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DOI: https://doi.org/10.1093/cid/civ578

French Perinatal Cohort

ART başlama zamanı ≈ Bulaş oranı

- Konsepsiyon öncesi : %0.2
- 1. trimestr: %0.4
- 2. trimestr: %0.9
- 3. trimestr: %2.2

Bazal Viral Yükün Önemi

Retrospektif, çok merkezli: 378 gebe (%77.2: doğum sırasında HIV RNA <50 k/mL)

- Bazal HIV-RNA
  <10,000 k/mL: ART başlanan gestasyonel yaş 26.3 haftaya kadar doğumdaki virolojik baskılanmayı etkilemiyor.
  >10,000 k/mL: ART 20.4 haftadan sonra başlanırsa, doğuma dek virolojik baskılanma şansı anlamlı olarak ↓

IMPAACT P1025: Prospektif kohort

- ART >32 haftada başlanırsa,
  doğum sırasında HIV-RNA >400 k/mL olma riski anlamlı olarak ↑

French Perinatal Cohort:

- 2,561 infant →Bulaş yok (CI üst sınırı %0.1)

- Konsepsiyon öncesi ART
- Gebelik boyunca devam
- Doğum sırasında HIV-RNA <50 k/mL

1. Read PJ, AIDS 2012; 2. Katz I, CROI 2012;
3. Mandelbrot L, CID 2015

Anneden Bebeğe Bulaş: Risk faktörleri

Doğum sırasında maternal plazma HIV-RNA <500 k/mL

Factors Associated with Mother-to-Child Transmission of HIV-1 Despite a Maternal Viral Load <500 Copies/mL at Delivery: A Case-Control Study Nested in the French Perinatal Cohort (EPF-ANRS CO1) FREE

Roland Tubiana; Jerome Le Chenadec; Christine Rouzioux; Laurent Mandelbrot; Karima Hamrene; Catherine Dollfus; Albert Faye; Constance Delaugerre; Stephane Blanche; Josiane Warszawski ✉; ... Show more

Clin Infect Dis (2010) 50 (4): 585-596. **DOI:** https://doi.org/10.1086/650005

Table 1. Comparison of Maternal and Obstetrical Characteristics between Case Patients (for Whom There Was Transmission of Human Immunodeficiency Virus) and Control Subjects (for Whom No Transmission Occurred)

Characteristic	Case patients	Control subjects	P^a
Year of delivery			
1997–1999	4 (21.1)	14 (23.3)	.69
2000–2002	8 (42.1)	26 (43.3)	
2003–2006	7 (36.8)	20 (33.3)	

19 olgu: Bulaş var
60 kontrol: Bulaş yok

- Konsepsiyon sırasında ART almayanlarda, bulaş daha yüksek %16 vs %45; P=.017
- Virolojik baskılanma (<500 k/mL) yoksa bulaş yüksek:
  - 14. hf: (%0 vs %38.1; P=.02),
  - 28 weeks (%7.7 vs %62.1; P=.005),
  - 32 weeks: (%21.4 vs %71.1; P=.004).

Çok değişkenli analiz:

30. haftadaki viral yük bulaş ile ilişkili

Bazal viral yük düzeyi, doğuma kadar virolojik baskılanma olasılığı ile ilişkili.

Antepartum Bakım

- CD4 sayısı ve HIV viral yükten bağımsız olarak ART mümkün olduğunca erken başlanmalı
- İlaç direnç testi sonuçları beklenmemeli
- CD4 sayısı, viral yük
- Geçmişte kullanılan ART rejimleri, toksisite, yan etki
- Fırsatçı infeksiyon için profilaksi
- HAV, HBV, HCV ve tüberküloz açısından tarama
- Aşılar: HAV, HBV, influenza, pnömokok, Tdap
- Tam kan sayımı, böbrek ve karaciğer fonksiyon testleri
- Uyum
- Şiddet mağduru? Destek ihtiyacı?
- Eş: HIV testi ve ARV profilaksi önerilmesi

ARV ilaç
Transplasental penetrasyon
NRTİ/NtRTİ

Gebelik sırasında izlem

- **HIV-RNA**: İlk vizit → ART başlandıktan veya değiştirildikten 2-4 hafta sonra → saptanamaz olana dek ayda bir → gebelik boyunca 3 ayda bir bakılmalı.

  Gestasyonun 34-36. hf: Doğum şeklini belirlemek için bakılmalı.

- **CD4**: İlk vizit → 3-6 ayda bir

- **Glukoz** taraması: 24-28. hf. Pİ bazlı ART alanlarda daha erken olabilir.

- **Ultrason**: İlk trimestr veya daha sonra mümkün olduğunca erken.
  - Gestasyonun yaşını saptamak için önemli.

Gebelik sırasında izlem

- **İnvaziv**

  - Amniyosentez, koriyonik villus örneklemesi: ART öncesi perinatal bulaş riskinde 2-4X artış

  - İnvaziv işlem şart ise ART başlanmış olmalı, HIV-RNA Ø olmalı

  - Koriyonik villus örneklemesi, kordosentez: Daha riskli. Bazı uzmanlar yapılmamasını önermekte.

  *Plasenta içinden veya yakınından iğne geçmemeli!

Gebelikte ARV İlaçların Kullanımı

- ART almakta ve virolojik baskılanma var ise

  - Aynı rejim ile devam edilir

  - İstisna: Didanozin, stavudin, tedavi dozunda ritonavir alıyorsa değiştirilir

  - EVG/Cobi, TAF

Gebelikte ART Başlanması

Mutlaka 2 NRTİ + **3. İlaç**

Önerilen Rejim

Drug	Comments
Preferred Initial Regimens in Pregnancy:	
• Drugs or drug combinations are designated as Preferred for initiating ART in ARV-naive pregnant women when clinical trial data in adults have demonstrated optimal efficacy and durability with acceptable toxicity and ease of use; pregnancy-specific PK data are available to guide dosing; in addition, there have been no established associations with teratogenic effects (from animal and/or human studies), and no clinically significant adverse outcomes for mothers, fetuses, or newborns have been reported.	
Preferred Two-NRTI Backbones	
ABC/3TC	Available as FDC. Can be administered once daily. ABC **should not be used** in patients who test positive for HLA-B*5701 because of risk of hypersensitivity reaction. ABC/3TC with ATV/r or with EFV is not recommended if pretreatment HIV RNA is >100,000 copies/mL.
TDF/FTC or TDF/3TC	TDF/FTC available as FDC. Either TDF/FTC (coformulated) or TDF with separate 3TC can be administered once daily. TDF has potential renal toxicity, thus TDF-based dual NRTI combinations should be used with caution in patients with renal insufficiency.
Preferred PI Regimens	
ATV/r plus a Preferred Two-NRTI Backbone	Once-daily administration. Extensive experience in pregnancy. Maternal hyperbilirubinemia; no clinically significant neonatal hyperbilirubinemia or kernicterus reported, but neonatal bilirubin monitoring recommended. Cannot be administered with proton-pump inhibitors; specific timing recommended for dosing with H2 blockers (see Table 9).
DRV/r plus a Preferred Two-NRTI Backbone	Better tolerated than LPV/r. PK data available. Increasing experience with use in pregnancy. Must be used twice daily in pregnancy.
Preferred Integrase Inhibitor Regimen(s)	
RAL plus a Preferred Two-NRTI Backbone	PK data available and increasing experience in pregnancy. Rapid viral load reduction (potential role for women who present for initial therapy late in pregnancy). Useful when drug interactions with PI regimens are a concern. Twice-daily dosing required.

Alternatif Rejim

Alternative Two-NRTI Backbones	
ZDV/3TC	Available as FDC. NRTI combination with most experience for use in pregnancy but has disadvantages of requirement for twice-daily administration and increased potential for hematologic toxicities.
Alternative PI Regimens	
LPV/r plus a Preferred Two-NRTI Backbone	Abundant experience and established PK in pregnancy. More nausea than with preferred agents. Twice-daily administration. Dose increase recommended in third trimester (see Table 9). Once-daily LPV/r is not recommended for use in pregnant women.
Alternative Integrase Inhibitor Regimens	
DTG plus a Preferred Two-NRTI Backbone	PK data available only in abstract form. No safety problems identified in limit experience in pregnancy. Available as FDC (with ABC, requiring HLA B5701 once daily. Useful when drug interactions with a PI are a concern. In non-pre associated with lower rates of INSTI resistance than RAL, and therefore sug with acute infection in pregnancy. Specific timing and/or fasting recommendations if taken with calcium or iron (e.g., in prenatal vitamins; Table 9).
Alternative NNRTI Regimens	
EFV plus a Preferred Two-NRTI Backbone	Concern because of birth defects seen in primate studies, but data not borne out in human studies and extensive experience in pregnancy; cautionary text remains in package insert (see Teratogenicity and Table 9). Preferred regimen in women who require co-administration of drugs with significant interactions with preferred agents, or who need the convenience of a coformulated, single-tablet, once-daily regimen and are not eligible for RPV. Screening for antenatal and postpartum depression is recommended. Higher rate of adverse events than drugs in Preferred category
RPV/TDF/FTC (or RPV plus a Preferred Two-NRTI Backbone)	RPV not recommended with pretreatment HIV RNA >100,000 copies/mL or CD4 cell count <200 cells/mm^3. Do not use with PPIs. PK data available in pregnancy but relatively little experience with use in pregnancy. Available in coformulated single-pill, once-daily regimen.

Akut HIV

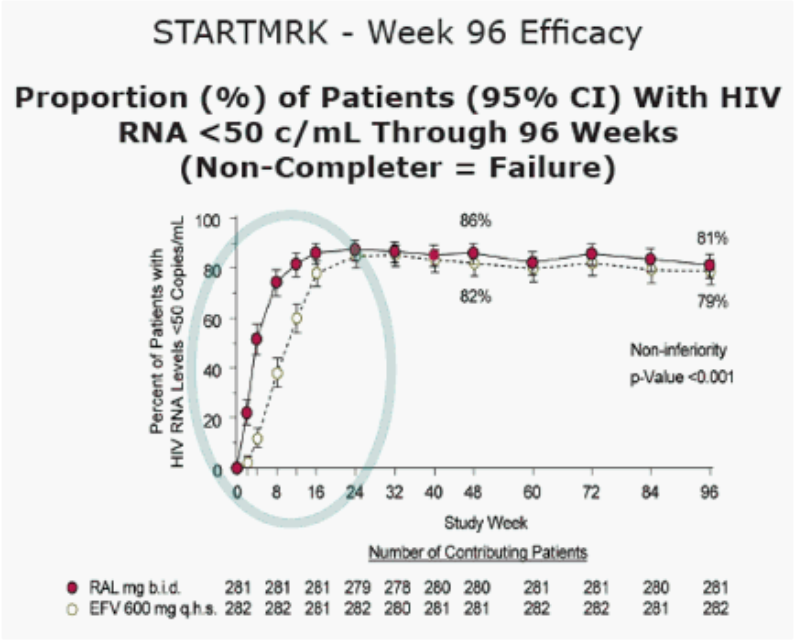
Yetersiz Veri ve Önerilmeyen Rejim

Insufficient Data in Pregnancy to Recommend Routine Use in Initial Regimens for ART-Naive Women:	
• Drugs that are approved for use in adults but lack adequate pregnancy-specific PK or safety data	
TAF/FTC Fixed Drug Combination	No data on use of TAF in pregnancy.
RPV/TAF/FTC Fixed Drug Combination	No data on use of TAF in pregnancy.
Not Recommended for Initial ART in Pregnancy:	
• Drugs whose use is not recommended as part of initial regimens in pregnancy because of toxicity, lower rate of viral suppression, or pharmacologic data suggesting insufficient serum drug levels in pregnancy, or because these drugs are not recommended in ART-naive populations.	
Note: Drugs not recommended for initial use because of toxicity (stavudine [d4T], didanosine [ddI], treatment-dose ritonavir [RTV], marked below with *) should also be stopped in women who present during pregnancy while taking these medications. For women who present on drugs not recommended for initial use because of concerns about viral breakthrough (EVG/COBI/TDF/FTC or EVG/COBI/TAF/FTC, marked below with **), providers should consider switching to more effective, recommended regimens. If an EVG/COBI regimen is continued, viral load should be monitored frequently, and therapeutic drug monitoring (if available) may be useful.	
Other medications listed below may be continued in women who present during pregnancy, as long as they are well tolerated and result in sustained virologic suppression.	
EVG/COBI/TDF/FTC** Fixed Drug Combination	Limited data on use of EVG/COBI component in pregnancy. Inadequate levels of both EVG and COBI in 2nd and 3rd trimester, as well as viral breakthroughs, have been reported. Specific timing and/or fasting recommendations, especially if taken with calcium or iron (e.g., in prenatal vitamins; see Table 9).
EVG/COBI/TAF/FTC** Fixed Drug Combination	Limited data on use of EVG/COBI as above; additionally, no data on use of TAF in pregnancy. Inadequate levels of both EVG and COBI in 2nd and 3rd trimester, as well as viral breakthroughs, have been reported. Specific timing and/or fasting recommendations, especially if taken with calcium or iron (e.g., in prenatal vitamins; see Table 9).

HIV/HBV
Değiştir / Devam et

COBI: Limited data on use of COBI
(including coformulations with ATV or DRV) in pregnancy.

Raltegravir ile Hızlı Virolojik Baskılama



İki haftada -2 log kopya/mL azalma

- Gebeliğin geç dönemi, HIV-RNA yüksek ise RAL içeren rejim başlanması
- ART almakta olan gebede viral yük yüksek ise rejime RAL eklenmesi
- Olgu sunumu: 35. haftada RAL eklenmesi ile KCFT↑*

*Renet S. *J Obstet Gynaecol Can. 2013*

ART ile infekte anneden bebeğe HIV bulaş oranı azalmakta.

A national review of vertical HIV transmission.
Forbes, John; Alimenti, Ariane; Singer, Joel; Brophy, Jason; Bitnun, Ari; Samson, Lindy; Money, Deborah; Lee, Terry; Lapointe, Normand; Read, Stanley

AIDS. 26(6):757-763, March 27, 2012.
DOI: 10.1097/QAD.0b013e328350995c

Kanada

Period	HAART	ART	No therapy	Total
1990–1996				
Mother–infant pairs (*n*)	0	154	208	362
Infected infants (*n*)	0	10	63	73
Transmission rate (%)	0	6.5	30.3	20.2
1997–2010				
Mother–infant pairs (*n*)	1707	322	268	2297
Infected infants (*n*)	17	5	44	66
Transmission rate (%)	1.0	1.6	16.4	2.9

HAART refers to antiretroviral regimens with three drugs including two nucleoside reverse transcriptase inhibitors (RTIs) with either a protease inhibitor or nonnucleoside RTI; ART refers to antiretroviral regimens that have one or two nucleoside RTIs. The data excludes mother–infant pairs for whom final infant HIV status was unknown ($n = 33$).

Table 1 Vertical transmission according to prescribed maternal antiretroviral therapy.

Doğum Şekli

- Doğuma yakın maternal **VY >1 000 k/mL** ise veya bilinmiyorsa
- 38. hf'da elektif sezaryen önerilir

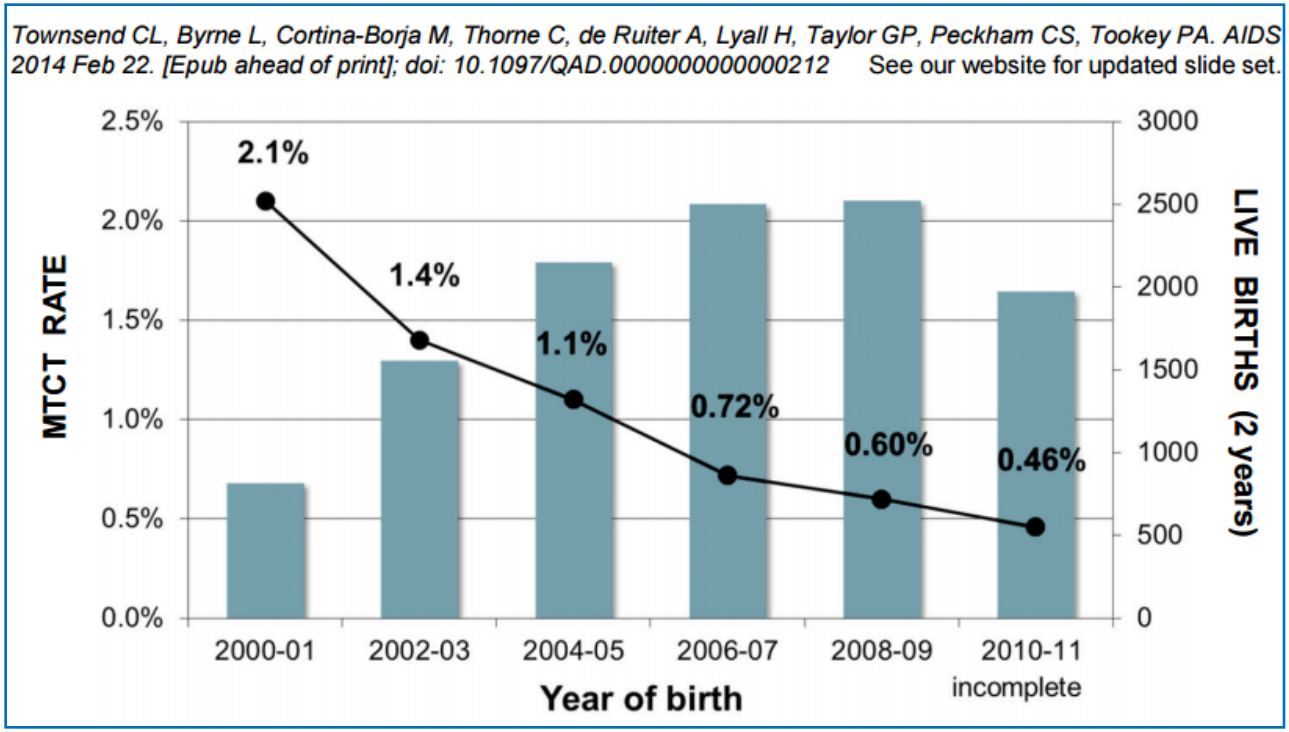
- VY < 1 000 k/mL ise vajinal doğum önerilir
- Başka bir endikasyon varsa zamanlaması ona uygun olmalı

- VY <1 000 k/mL, membran rüptürü: Vajinal doğum önerilir

ART: Yıllar içinde anneden bebeğe HIV bulaş riski azalmakta

Sezaryen doğumun ek katkısı

12,486 infant, İngiltere ve İrlanda



- N=63 postnatal bulaş hariç.
-Düşük viral yük ile anneden bebeğe bulaş riski ↓.
- ARV rejim ve doğum şeklinden bağımsız.

HIV-RNA k/mL	Bulaş %
<50	0.09
50-399	1

- Elektif sezaryen: %0.26 (2/777)
- Planlanmış vajinal doğum: %1.1 (2/188)

P=0.17*

Townsend CL. AIDS. 2014;28(7):1049-1057. **In utero* bulaş hariç

Zidovudin

- Doğuma yakın maternal VY **>1 000 k/mL** ise veya bilinmiyorsa
- Anneye İ.V. ZDV önerilir.

- Doğuma yakın, gebeliğin sonları:
- VY ≤50 k/mL, ART uyumu iyi ise ZDV önerilmez
- VY 50-999 k/mL: Önerilebilir. Ek katkısı?

Doğumdan 3 saat önce yükleme: 2 mg/kg
Doğum süresince sürekli infüzyon: 1 mg/kg/saat …

IV ZDV yoksa, PO 600 mg yükleme
Takiben her 3 saatte bir 400 mg …

Table 7. Newborn Antiretroviral Management According to Risk of HIV Infection in the Newborn

Drug selection and dosing considerations are related to the age and gestational age of the newborn. Consultation is available through the National Perinatal HIV Hotline (888-448-8765).

Category	Description	Neonatal ARV Management
Low Risk of Perinatal HIV Transmission	Mothers received standard ART during pregnancy with sustained viral suppression near delivery and no concerns related to adherence	4 weeks of ZDV
Higher Risk of Perinatal HIV Transmission[a,b]	• Mothers who received neither antepartum nor intrapartum ARV drugs • Mothers who received only intrapartum ARV drugs • Mothers who received antepartum and intrapartum ARV drugs but who have detectable viral load near delivery, particularly if delivery was vaginal • Mothers with acute or primary HIV infection during pregnancy or breastfeeding[c]	Combination ARV prophylaxis with 6 weeks ZDV and 3 doses of NVP (prophylaxis dosage) **or** Empiric HIV therapy consisting of ZDV, 3TC, and NVP (treatment dosage)[d]
Presumed Newborn HIV Exposure	Mothers with unknown HIV status who test positive at delivery or postpartum or whose newborns have a positive HIV antibody test	ARV management as above (for higher risk of perinatal HIV transmission). ARV management should be discontinued immediately if supplemental testing confirms that mother does not have HIV.
Newborn with Confirmed HIV[e]	Confirmed positive newborn HIV virologic test/NAT	3 drug combination ARV regimen at treatment dosage

[a] See text for evidence supporting combination ARV prophylaxis and empiric HIV therapy.

[b] See the Intrapartum Care section for guidance on indications for scheduled cesarean delivery and intrapartum IV ZDV to reduce the risk of perinatal HIV transmission for mothers with elevated viral load at delivery.

[c] Most experts would opt to administer empiric HIV therapy to infants with acute HIV during pregnancy because of the high risk for *in utero* infection. If acute HIV is diagnosed during breastfeeding, mother should stop breastfeeding.

[d] The optimal duration of empiric HIV therapy in newborns at higher risk of perinatal HIV transmission is unknown. Many experts administer 6 weeks of combination therapy; others opt to discontinue NVP and/or 3TC after the return of negative newborn testing. ZDV should be continued for 6 weeks.

[e] Most experts do not recommend delaying the initiation of ART while waiting for the results of the confirmatory HIV NAT, given low likelihood of false-positive HIV NAT testing.

Note: ARV drugs should be initiated as close to the time of birth as possible, preferably within 6 to 12 hours of delivery. See Table 8 for dosing specifics.

Key to Acronyms: 3TC = lamivudine; ART = antiretroviral therapy; ARV =antiretroviral; IV = intravenous; NAT = nucleic acid test; NVP = nevirapine; ZDV = zidovudine

Emzirme

THE LANCET
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Originally published as Volume 2, Issue 8819

EPIDEMIOLOGY

Risk of human immunodeficiency virus type 1 transmission through breastfeeding

D.T Dunn MSc, M.L Newell MB, A.E Ades PhD, C.S Peckham MD

- Sistematik literatür taraması

Anne: HIV İnfeksiyonu	Çalışma Sayısı	Bulaş Oranı
Postnatal	4	**%29** 95% CI %16-42
Prenatal	5	**+%14*** 95% CI %7-22

*In-utero ve doğum sırasındaki bulaşa ek olarak

Akut HIV İnfeksiyonu

- Gebelik veya emzirme döneminde ise perinatal bulaş riski artar.
- 2002-2006: New York State[1]

  n=3,396 HIV maruziyeti olan yenidoğan

  - Anne gebelikte HIV infekte olmuşsa: İnfantların **%22**'si HIV+
  - HIV infeksiyonu gebelik dışında ise: İnfantların **%1.8**'i HIV+

  OR: **15.19**; %95 CI, 3.98-56.30
- Gebelik sırasında serokonversiyon: Perinatal bulaş oranı **8X** ↑[2]

  - %12.9 vs. %1.6, p<0.0001

- Plazma, anne sütü ve genital traktüste yüksek viral yük!!!

1. Birkhead GS, Obstet Gynecol2010; 2. Singh S, CROI 2013

Gebelikte ARV İlaçların Kullanımı

- Uyum
- Teratojenite, fetüs ve yenidoğana advers etki
- Gebelikteki PK değişiklikler
- Gebelikte kullanımı deneyimi
- Maternal advers etki

Teratojenite

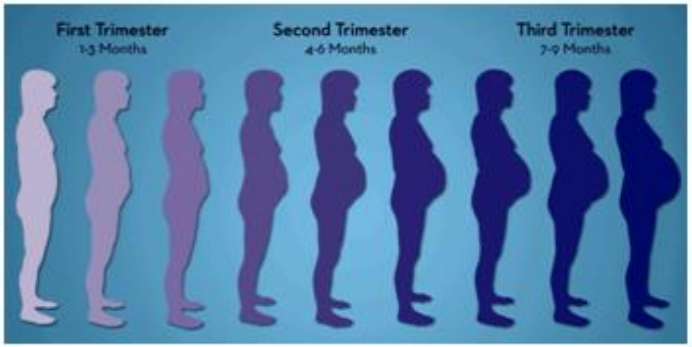
- Antiretroviral Pregnancy Registry (APR)

ARV maruziyeti Trimestr	Doğum defekti / 100 canlı doğum
I	**2.7**
II ve III	**2.8**

- Yanlılık? Folik asid kullanımı, antifolat ajanlar (TMP-SMZ)

İstenmeyen gebeliğin önlenmesi

Antiretroviral Tedavi



… Erken USG

HIV-RNA
Doğum şekline karar verme
Doğum sırasında İ.V. ZDV gerekli mi?
Bebeğe profilaksi?

Bebek
- Profilaksi
- Ampirik Tedavi
- HIV Tedavisi

UNAIDS

Dr. Figen KAPTAN
KLİMİK İzmir 30.11.2017