# اپروچ به خانم ۲۳ ساله باردار مبتلا به آبله مرغان در درمانگاه پزشکی خانواده

**استاد راهنما: استاد فاضل**

ارائه دهنده: محمدامین روانبخش، کارورز پزشکی خانواده

# Chief complaint

خانم باردار ۱۶ هفته با شکایت ضایعات گرد و کوچک خارش دار

# Present illness

بیمار خانم ۲۷ ساله ایرانی باردار ۱۶ هفته، با شکایت ضایعات پاپولار و وزیکولار خارش دار در صورت، قفسه سینه، شکم و پشت از دو روز قبل مراجعه کرده است.

تب و لرز - سردرد - سرفه: - تنگی نفس - درد قفسه سینه - گلودرد -

بدن درد - کاهش اشتها -

ضایعات مشابه در اطرافیان بیمار -

سابقه تماس اخیر با فرد مبتلا به آبله مرغان را نمی دهد.

سابقه ابتلا به آبله مرغان در کودکی را نمی داند.

PMH: -

PSH: -

DH: -

AH: -

HH: -

FH: -

# Physical examination

بیمار خانم جوان، هوشیار و اورینته است. ill - toxic –

ملتحمه pale نیست. اسکلرا ایکتریک نیست. کاشکتیک –

Vital signs: PR: 70 BP: 125/80 RR:16 T:37.2 O2 sat: 96%

در معاینه پوست: ضایعات متعدد پاپولار و وزیکولار در صورت و قفسه سینه و پشت دارد.

سمع ریه: نرمال است و کاهش صدا یا صدای اضافه ندارد.

سمع قلب: s1 و s2 بدون سوفل سمع شد.

معاینه شکم: نرم و بدون تندرنس

معاینه اندام ها: نرمال است. نبض های دیستال پر و قرینه است.

# DDX

- Chickenpox
- Shingles
- Herpes simplex
- Bacterial infections
- …

# Varicella-zoster virus(VZV) infection in pregnancy

**INTRODUCTION** — Varicella infection in children is generally a mild disease, while infection in adults can lead to significant morbidity and mortality. During pregnancy, varicella pneumonia can be particularly severe and maternal infection can lead to congenital abnormalities with devastating consequences .

VZV infection causes two clinically distinct forms of disease: varicella (chickenpox) and herpes zoster (shingles).

Although <2 % of reported cases of varicella infections occur among adults >20 years of age, almost a quarter of all VZV-related mortality occurs among this age group. Thus, pregnant women are at risk for substantial morbidity and mortality.

# EPIDEMIOLOGY

**Maternal varicella** :

The incidence of varicella is low among adults because most are immune to infection (>95 % (but 50% among persons living in tropical areas))

Although the incidence of varicella is not increased in pregnant compared with nonpregnant adults, disease severity appears to be higher during pregnancy.

**Varicella pneumonia**: 10-20 % of maternal infections .

Risk factors: smoking and having greater than 100 cutaneous vesicles

**Congenital varicella** :in <2 % of women who have acquired varicella infection during the first 20 weeks of gestation.

# TRANSMISSION

**Person to person** : from 1-2 days prior to onset of rash until the lesions are crusted over.

- droplets
- direct contact with vesicular fluids
- Airborne spread of virus(rare)

Susceptible persons can also acquire varicella infection from exposure to persons with zoster, although the transmission rates are considerably lower and usually require close exposure to open cutaneous lesions

**Mother to infant :**

**Intrauterine or perinatal:** transplacental transmission

**Postnatal**: respiratory droplets or direct contact

Passage of varicella-zoster virus to the fetus during zoster is rare.

**INCUBATION PERIOD** :10-21 days after exposure in adults or children

# CLINICAL FEATURES OF MATERNAL VZV INFECTION

## Uncomplicated varicella

Pruritic vesicles on the face, trunk and extremities. New vesicle formation generally stops within 4days.

Many patients experience fever, malaise, and myalgia 1-4 days prior to the onset of rash.

The lesions begin as macules that rapidly become papules followed by vesicles.

These lesions can then develop a pustular component followed by the formation of

crusted papules .Most lesions have fully crusted by day 6 in normal hosts.

## Primary varicella lesions

Vesicular lesions on an erythematous base are characteristic of chickenpox. The lesions occur in crops and are present in a variety of stages from maculopapular to vesicular or even pustular. Central necrosis and early crusting is also visible.

**Complicated infection** :

Varicella-related complications are more common in adults than children and include meningitis, encephalitis, cerebellar ataxia, pneumonia, glomerulonephritis, myocarditis, ocular disease, adrenal insufficiency, and death.

**Varicella pneumonia** : The most common

Symptoms :cough, dyspnea, fever, and tachypnea

The pneumonia usually develops within one week of the rash. The clinical course is unpredictable and may rapidly progress to hypoxia and respiratory failure with high rates of mortality in untreated infection.

# FETAL EFFECTS OF VZV INFECTION

**1- congenital varicella syndrome**: If the mother acquires varicella infection during the early gestational period (weeks 8 to 20), the fetus is at risk for developing congenital varicella syndrome.

- Cutaneous scars
- Neurological, ocular, limb and gastrointestinal abnormalities
- IUGR & Low birth weight

Mortality rate of 30 % in the first few months of life and a 15 % risk of developing herpes zoster in the first four years of life.

NOTE: Maternal herpes zoster infection is not associated with a significant risk of congenital varicella syndrome

**Newborn infant with cicatricial (scarring) skin lesions due to congenital varicella infection**

Cicatricial (scarring) skin lesions associated with congenital varicella infection are typically depressed and pigmented in a dermatomal distribution. Other features of congenital varicella syndrome include intrauterine growth restriction, ocular defects, limb abnormalities, and central nervous system abnormalities.

# FETAL EFFECTS OF VZV INFECTION

**2- neonatal varicella :**Neonates born to mothers who have clinical disease within 5days before to 2days after delivery are at risk for neonatal varicella, which may present with mild rash to disseminated infection.

- Management includes isolation and post-exposure prophylaxis(VZIG)

**3- Prematurity and spontaneous abortion**

# DIAGNOSIS

**Maternal varicella** — The diagnosis is clinical.

- PCR: If there is doubt about the clinical diagnosis
- Serologic testing will not help.

- The diagnosis of **varicella pneumonia** should be considered when a pregnant woman has typical skin lesions, contact with varicella, and respiratory symptoms

# DIAGNOSIS

## Congenital varicella syndrome

### Prenatal diagnosis

PCR(testing of fetal blood or amniotic fluid for VZV DNA) between 17 and 21 weeks

+

UltraSonography 5weeks after maternal infection for detection of fetal abnormalities (microcephaly, limb hypoplasia, IUGR)

- Normal imaging and PCR : ok
- normal US with PCR+ : repeat ultrasound at 22-24 weeks. If normal:ok
- If the ultrasound shows evidence of congenital varicella syndrome, the woman should be counseled regarding likely fetal disease .
- Serologic testing of the fetus is not useful.

**Postnatal diagnosis :** requires the following criteria

- History of maternal varicella infection during the first or second trimester

- Presence of compatible fetal abnormalities consistent with congenital varicella syndrome

- Evidence of intrauterine VZV infection: detection of VZV DNA in the newborn; presence of VZV-specific IgM antibodies in cord blood; persistence of VZV IgG beyond seven months of age; appearance of clinical zoster infection during early infancy.

# MANAGEMENT OF MATERNAL VARICELLA INFECTION

## Uncomplicated varicella infection

**oral acyclovir therapy (800 mg five times per day for seven days)** for all pregnant women with uncomplicated varicella.

Acyclovir treatment is associated with faster healing of skin lesions and a shorter duration of fever, if initiated within 24 hours of symptom onset .

## Varicella pneumonia

Varicella pneumonia during pregnancy is a medical emergency. We recommend **intravenous acyclovir (10 mg/kg every eight hours)**.

Although acyclovir crosses the placenta, it is unknown if this antiviral agent decreases the risk of congenital varicella syndrome .

## POST-EXPOSURE PROPHYLAXIS

**Evaluating susceptibility** — A self-reported history of varicella among pregnant women is a powerful predictor of antibodies to varicella infection . In addition, most women without a history of varicella have serologic evidence of past infection.

- Ideally, a VZV serologic test(IgG test) should be conducted among those women who report no history of varicella .
- prophylaxis should be offered within 10 days of exposure. If results of serologic testing are not available within this time frame, then post-exposure prophylaxis should be offered.

## Defining exposure

- Household contact
- Face to face contact with an index case for five minutes
- Sharing the same hospital room with a contagious patient.

**Immuno-prophylaxis for the prevention of maternal varicella infection**

We recommend **VariZIG** in all nonimmune pregnant women who have been exposed to persons with VZV .

VariZIG should be administered as soon as possible within 10 days of exposure.

VariZIG is supplied as 125-unit vials. The recommended dose is 125 units/10 kg body weight given IM, with a maximum dose of 625 units (5 vials).

For pregnant women who cannot receive VariZIG within 10 days of exposure, clinicians may choose either to administer a single dose of **IVIG** at 400 mg/kg or closely monitor for signs and symptoms of varicella and institute treatment with acyclovir if illness occurs.

- Patients need careful follow-up for signs of infection despite passive immunization. Those who are infected despite post-exposure prophylaxis should be treated for varicella infection.

- Susceptible pregnant women who receive post-exposure prophylaxis and do not develop varicella should undergo vaccination against varicella after delivery and at least five months following administration of immuno-prophylaxis.

**Antiviral therapy** — There are no data on whether acyclovir is beneficial in reducing the risk of varicella after exposure during pregnancy

## PRE-EXPOSURE PROPHYLAXIS(vaccination)

### Non-pregnant females

We recommend that all women of child-bearing age be assessed prior to conception for evidence of varicella immunity by either :

- A history of previous vaccination
- Prior varicella infection
- Laboratory evidence of immunity

Non-pregnant women who do not have evidence of immunity to varicella should be offered the standard dosing of vaccine (2 doses 4-8 weeks apart)

**Note**: Women should avoid becoming pregnant for one month after immunization.

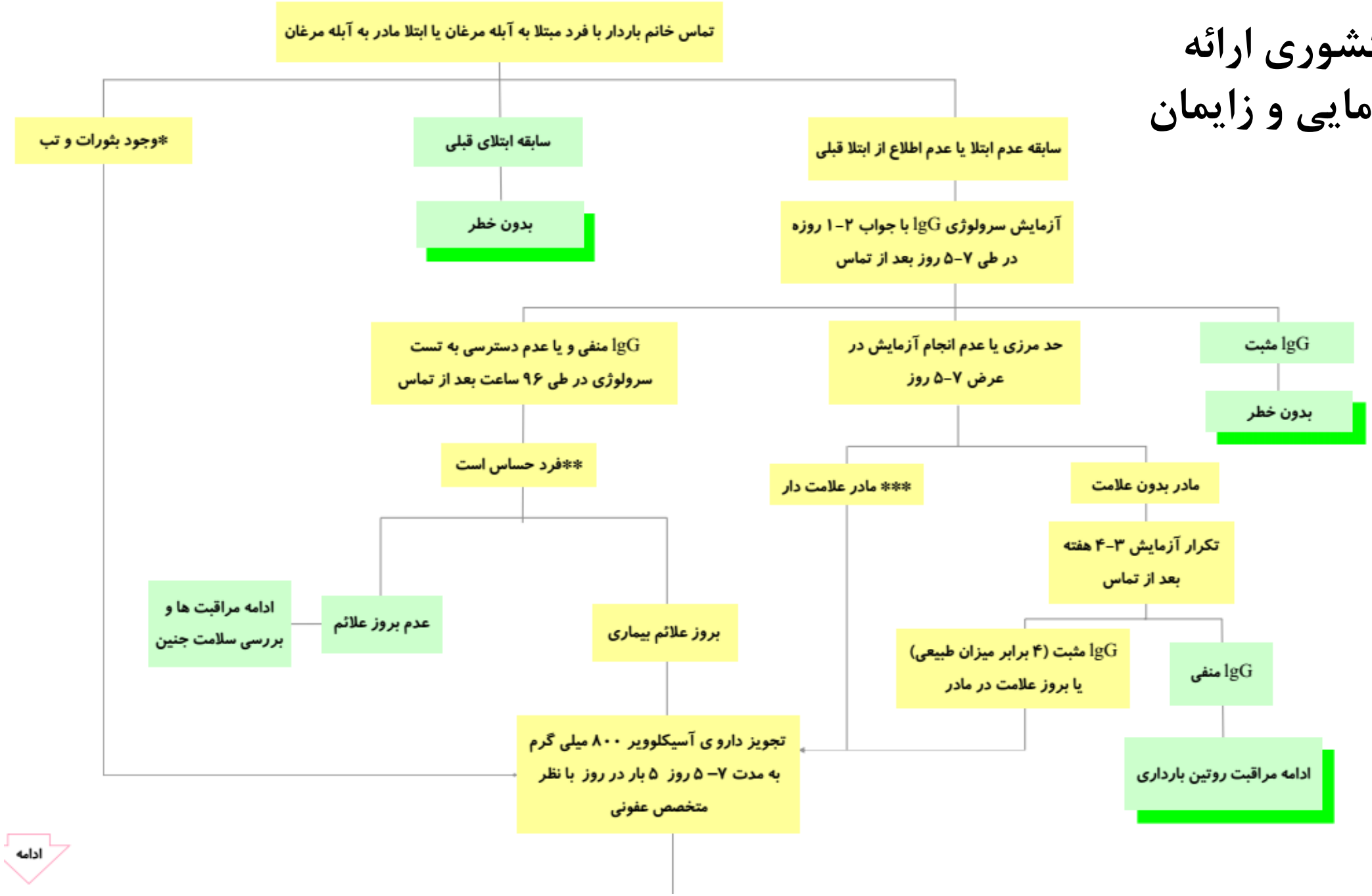
## Pregnancy

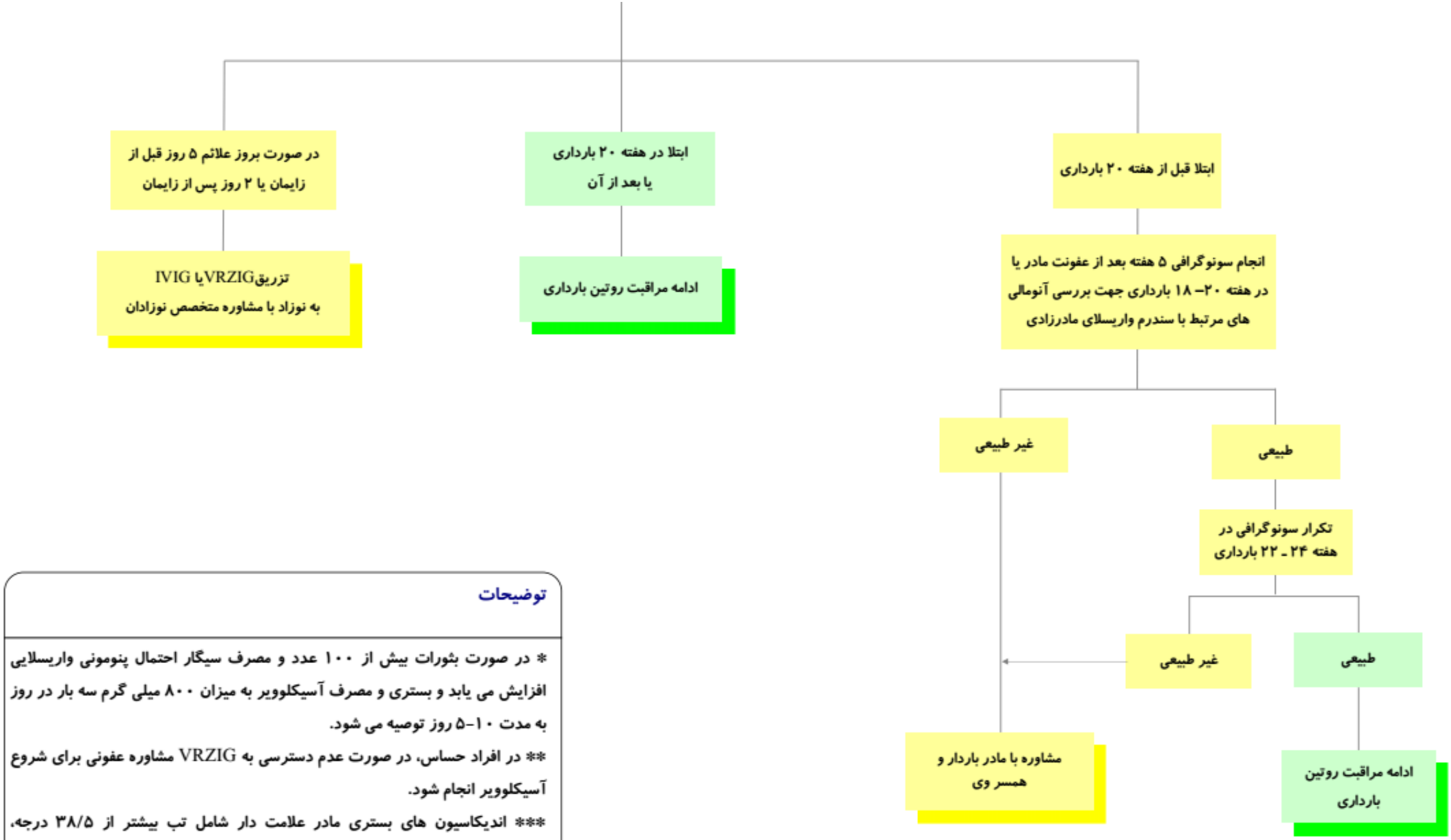
Pregnant women should not receive this vaccine. However, if a pregnant woman is found to be nonimmune during pregnancy, varicella vaccine should be recommended immediately after delivery with the second dose administered at the six-week postpartum visit.

## Household contacts of pregnant women

Household contacts of a pregnant woman can receive the varicella vaccine.

# راهنمای کشوری ارائه خدمات مامایی و زایمان






**توضیحات**

* در صورت بثورات بیش از ۱۰۰ عدد و مصرف سیگار احتمال پنومونی واریسلایی افزایش می یابد و بستری و مصرف آسیکلوویر به میزان ۸۰۰ میلی گرم سه بار در روز به مدت ۱۰–۵ روز توصیه می شود.

** در افراد حساس، در صورت عدم دسترسی به VRZIG مشاوره عفونی برای شروع آسیکلوویر انجام شود.

*** اندیکاسیون های بستری مادر علامت دار شامل تب بیشتر از ۳۸/۵ درجه، پنومونی، آنسفالیت، دردهای زایمان زودرس.

# سطوح پیشگیری

**Primordial Prevention**

**Primary Prevention**

**Secondary Prevention**

**Tertiary Prevention**

**Quaternary Prevention**

# Primordial Prevention

۱- آموزش صحیح به پزشکان و مراقبین سلامت جهت برخورد صحیح با مادران باردار با علائم آبله مرغان یا سابقه تماس با فرد مبتلا

۲- آموزش های لازم در سطح جامعه در مورد اهمیت ابتلای مادران باردار به آبله مرغان و خطرات آن

۳- اطلاع رسانی به تمام افراد جامعه برای تشکیل پرونده الکترونیک سلامت جهت ثبت اطلاعات و سوابق شخصی و خانوادگی

# Primary Prevention

۱- آموزش چهره به چهره به مادران باردار جهت مراجعه به پزشک و اطلاع وی در صورت بروز علائم آبله مرغان یا برخورد با فرد مشکوک به آبله مرغان

۲- توصیه به مادران باردار جهت دوری از افراد مبتلا یا مشکوک به آبله مرغان و جدا سازی محیط فیزیکی

۳- تجویز ایمونوپروفیلاکسی بر اساس اندیکاسیون

# Secondary Prevention

۱- انجام واکسیناسیون قبل از بارداری در صورت نداشتن سابقه ابتلا در کودکی

۲- بررسی خانم ها در سن باروری(قبل از بارداری) از نظر سابقه ابتلا به آبله مرغان، سابقه واکسیناسیون و بررسی سرولوژی از نظر وجود ایمنی

## Tertiary Prevention

۱- درمان و پیگیری مناسب در مادران باردار مبتلا به آبله مرغان  یا دارای سابقه تماس اخیر با فرد مبتلا

۲- ارجاع جهت بستری و تجویز داروی وریدی بر اساس اندیکاسیون

# Quaternary Prevention

۱- عدم انجام اقدامات تشخیصی و درمانی اضافی

۲- جلوگیری از بستری بی مورد در مادران باردار مبتلا به آبله مرغان

۳- عدم تجویز نامناسب دارو، ایمونوپروفیلاکسی و واکسن