Health & Mind

DIABETES IN PREGNANCY

Dr. Cynthia Alexander MD . , DGO .
Consultant Gynecologist, Obstetrician
Padma Clinic & Nursing Home

Price Rs. 5/- Only

April - 2012

Health -2

Mind- 4

Yearly Subscription

Rs. 60/- only

Editor
&
Publisher
Dr. Kannan Gireesh

Padma Clinic
&
Nursing Home

432/753, Poonamallee
High Road,
Kilpauk Chennai - 10

Ph : 26413445, 26413446,
26412477

INTRODUCTION:

Abnormalities of carbohydrate metabolism occur frequently during pregnancy and between 3% and 5% of all pregnant patients will show glucose intolerance. Approximately 90% of these women have gestational diabetes mellitus. These women are prone for type II diabetes - 50% in later life. A small group will be diabetic prior to pregnancy.

CLASSIFICATION OF PREGNANCY DIABETES

Pregestational or overt diabetes (10%)

Presence of diabetes Type I or Type II before pregnancy. Pre - existing diabetes worsens in pregnancy and insulin requirements increase considerably.

Gestational Diabetes (90%)

Carbohydrate intolerance of variable severity with onset or first recognition during the present pregnancy.

COMPLICATIONS:

Maternal Complication

1. Pre - eclampsia
2. Polyhydramnios - due to maternal hyperglycemia - fetal hyperglycemia - polyuria - Suggests poor diabetic control.
3. Preterm delivery
4. Infections - UTI and vulvovaginal cardidiasis
5. Ketoacidosis - May be associated with hyperemesis or infections
6. Ceasarean section
7. Genital tract trauma - due to macrosomia
8. Puerperal sepsis and wound infection In overt diabetes - diabetic nephropathy and retinopathy may progress. Post - partum thyroiditis can occur in Type I diabetes.

Fetal Complications

Pederson hypotheses - Maternal hyperglycemia → fetal hyperglycemia → fetal hyperinsulinemia → Perinatal problems

1. abortion - in uncontrolled diabetes
2. Congenital malformation
   - Cardiac defects commonest - (TGA, VSD)
   - Neural tube defects (anencephaly, spine bifida)
   - Caudal regression syndrome or sacral agenesis - specific to diabetes.
3. Unexplained intrauterine death.
   - due to fetal hyperglycemia and hyperinsulinemia ↓
   ↓ ed oxygen demand to fetus
   - Fetal polycythemia and hyperviscosity
   - In overt diabetes - placenta insufficiency due to vasculopathy.
4. Prematurity
5. Macrosomia - due to fetal hyperinsulinemia - IGF - I&II
6. Shoulder dystocia - due to disproportionate growth with ↑ed shoulder to head ratios.

→ Neonatal Complication

1. Respiratory distress syndrome
2. Hypoglycemia - due to fetal hyperinsulinemia

3. Hypocalcemia - due to transient hypoparathyroidism
4. Polycythemia
5. Hyperbilirubinemia - due to increased erythropoiesis
6. Hyperviscority syndrome → renal vein thrombosis and necrotising enterocolitis
7. Hypertrophic cardiomyopathy
8. Birth trauma → Erb's and klumpke's paralysis fractures of the clavicles and humerus.

→ **Late effects**

1. Obesity
2. Early onset type II diabetes
3. Cardiovasular disease

GESTATIONAL DIABETES

Screening:

- Early screening
- Universal screening - all women - in high prevalence areas
- Repeated screening

Risk factors - 1) age >30 2) previous GDM 3)family H/O diabetes 4)previous macrosomic baby

Management

- Tight glycemic control
- Antepartum fetal surveillance

→ **Medical management**

- diet - recommended caloric intake - 30cal/kg/day based on pre - pregnant weight - divided over three meals and three snacks.
- rich in fibre and protein.
- low in fat.
- Exercise - of upper part of the body - 20min daily
- Insulin - mixture of rapid and intermediate acting insulin like mixtared - twice daily 2/3rd dose in morning, 1/3rd dose at night.
- Monitoring - aim to keep fasting plasma values <90 2hr post prandial values <120mg/dl.

Obstetric Management

ANTEPARTUM - if complications occur - hospitalization.

- regular USG for fetal growth and liquor volume in third trimester
- Commence around 32wks.
- Twice weekly NST
- Doppler velocimetry if associated with pre eclampsia.

INTRAPARTUM:

Timing of delivery

- Not requiring insulin & no complication - taken up to 40 weeks with intensive antepartum fetal surveillance
- on insulin - 38weeks.
- in case of complication - delivery at 38weeks or even earlier.

Type of delivery

- if no maternal or fetal complication, cervix is favorable, baby - average size, vertex presentation with no CPD.
- Vaginal delivery
- Labour may be induced
- Continous CTG monitoring
- if maternal or fetal complication + macrosomia
- Caeserean section
- spinal or epidural anesthesia

Intrapartum glycemic control

morning dose to be skipped - in the event of induction or elective caesarean section frequent blood sugar monitoring - hourly

if <100 - no insulin

if insulin needed - infusion at the rate of 1-1.5 units per hour.

Neonatal care

- neonatologist - should be present at delivery.
- intensive neonatal care - for first 48hours
- early breast feeding.
- early cord clamping - to prevent neonatal polycythemia
- check for congenital malformation and metabolic complication.

POSTPARTUM CARE

- Prophylactic antibiotics - to minimize infection
- 75g GTT at 6wks postpartum
- Counselled for future diabetes and lifestyle advice.

CONTRACEPTION

- barrier methods
- low dose combined oral contraceptive pill
- injectable progestogens
- IUCD (but may cause infection)

PREGESTATIONAL OF OVERT DIABETES

- management similar to gestational diabetes
- prone for congenital malformations

Management

Pre - Conceptional Care

- good glucose control pre conceptionally
- planned pregnancy
- folic acid in first trimester and periconceptionally

Special Investgations

- fundoscopy - diabetic retinopathy
- renal function tests - diabetic nephropathy
- ECG

- urine culture
- glycosylated Hb at the end of first trimester

Obstetrical Management

- early dating scan
- nuchal translucency at 11-14 weeks
- anomaly scan at 20 weeks
- fetal echocardiography at 24 weeks
- frequent antenantal visits
- regular glycemic check and the need for insulin altered
- require hospitalization around 32 weeks
- if complications present - earlier delivery

Postpartum

- insulin requirements rapidly revert to non-pregnant levels.

MILESTONES OF BABIES FROM 3 HOURS TO 3 YEARS

Dr. SHAFATH AHMED. M.D. D.C.H.

Professor of Pediatrics
SreeBalaji Medical College And Hospital, Chromepet
Consultant Pediatrician& Neonatologist
Padma Clinic & Nursing Home

Introduction

The Pediatrician is frequently asked "Doctor is my baby NORMAL?"

What exactly is NORMAL?

Babies grow in such unique ways:

The baby who sits up weeks before her peers might be one of the last to learn how to crawl.

Or the 18-month-old who's still communicating with gestures and grunts, suddenly

bursts forth with sentences and phrases at 2 years.

That's why this series of charts.was created. Since babies aren't identical so be prepared for variations in stages of development.

Use them to enjoy what you're observing in your baby today, and to look forward to what you can enjoy in the coming months .

However one thing you shouldn't use the charts for, is worrying & comparison.

Each chart is meant as a guide, not as a source of concern.

Remember that there are ethnic and cultural variations and also environmental stimulations

Child's Age	Mastered Skills (most kids can do)	Emerging Skills (half of kids can do)	Advanced Skills (a few kids can do)
1 month	Lifts head when lying on tummy Responds to sound Stares at faces	Follows objects briefly with eyes Vocalizes: oohs and aahs Can see black-and-white patterns	Smiles, laughs Holds head at 45-degree angle
2 months	Vocalizes: gurgles and coos Follows objects across field of vision Notices his hands Holds head up for short periods	Smiles, laughs Holds head at 45-degree angle Makes smoother movements	Holds head up for short periods Holds head steady Can bear weight on legs Lifts head and shoulders when lying on tummy (mini-pushup)
3 months	Recognizes your face and scent Holds head steady Visually tracks moving objects	Squeals, gurgles, coos Blows bubbles Recognizes your voice Does mini-pushup	Rolls over, from tummy to back Turns toward loud sounds Can bring hands together, bats at toys

Child's Age	Mastered Skills (most kids can do)	Emerging Skills (half of kids can do)	Advanced Skills (a few kids can do)
4 months	Smiles, laughs Can bear weight on legs Coos when you talk to him	Can grasp a toy Rolls over, from tummy to back	Imitates sounds: "baba," "dada" Cuts first tooth May be ready for solid foods
5 months	Distinguishes between bold colors Plays with his hands and feet	Recognizes own name Turns toward new sounds Rolls over in both directions	Sits momentarily without support Mouths objects Separation anxiety may begin
6 months	Turns toward sounds and voices Imitates sounds Rolls over in both directions	Is ready for solid foods Sits without support Mouths objects Passes objects from hand to hand	Lunges forward or starts crawling Jabbers or combines syllables Drags objects toward himself
7 months	Sits without support Drags objects toward herself	Lunges forward or starts crawling Jabbers or combines syllables Starts to experience stranger anxiety	Waves goodbye Stands while holding onto something Bangs objects together Begins to understand object permanence
8 months	Says "mama" or "dada" to parents (isn't specific) Passes objects from hand to hand	Stands while holding onto something Crawls Points at objects Searches for hidden objects	Pulls self to standing, cruises Picks things up with thumb-finger pincer grasp indicates wants with gestures
9 months	Stands while holding onto something Jabbers or combines syllables Understands object permanence	Cruises while holding onto furniture Drinks from a sippy cup Eats with fingers Bangs objects together	Plays patty-cake and peek-a-boo Says "mama" or "dada" to the correct parent
10 months	Waves goodbye Picks things up with pincer grasp Crawls well, with belly off the ground	Says "mama" or "dada" to the correct parent Indicates wants with gestures	Stands alone for a couple of seconds Puts objects into a container
11 Months	Says "mama" or "dada" to the correct parent Plays patty-cake and peek-a-boo Stands alone for a couple of seconds Cruises.	Understands "no" and simple instructions Puts objects into a container.	.Says one word besides "mama" or "dada" Stops from standing position.
12 Months	Imitates others' activities Indicates wants with gestures.	Takes a few steps Says one word besides "mama" or "dada".	Walks alone Scribbles with a crayon Says two words besides.
13 Months	Uses two words skillfully (e.g., "hi" and "bye") Bends over and picks up an object	Enjoys gazing at his reflection Holds out arm or leg to help you dress him.	Combines words and gestures to make needs known Rolls a ball back and forth.
14 Months	Eats with fingers Empties containers of contents Imitates others.	Toddles well Initiates games Points to one body part when asked Responds to instructions (e.g., "give me a kiss")	Uses a spoon or fork Matches lids with appropriate containers Pushes and pulls toys while walking.
15 Months	Plays with ball Uses three words regularly Walks backward.	Scribbles with a crayon Runs Adopts "no" as his favorite word.	"Helps" around the house Puts his fingers to his mouth and says "shhh"

Child's Age	Mastered Skills (most kids can do)	Emerging Skills (half of kids can do)	Advanced Skills (a few kids can do)
16 Months	Turns the pages of a book Has temper tantrums when frustrated Becomes attached to a soft toy or other object.	Discovers the joy of climbing Stacks three blocks Uses spoon or fork Learns the correct way to use common objects (e.g., the telephone).	Takes off one piece of clothing by himself Gets finicky about food Switches from two naps to one.
17 Months	Uses six words regularly Enjoys pretend games Likes riding toys.	Feeds doll Speaks more clearly Throws a ball underhand.	Dances to music Sorts toys by color, shape, or size Kicks ball forward.
18 Months	Will "read" board books on his own Scribbles well.	Strings two words together in phrases Brushes teeth with help Stacks four blocks.	Throws a ball overhand Takes toys apart and puts them back together Shows signs of toilet training readiness.
19 Months	Uses a spoon and fork Runs Throws a ball underhand Enjoys helping around the house.	Understands as many as 200 words Recognizes when something is wrong (e.g., calling a dog a cat).	Washes and dries own hands with help Points to picture or object when you call it by name May know when she needs to pee.
20 Months	Feeds doll Takes off own clothes Dumps an object in imitation, such as throwing garbage away.	Learns words at a rate of ten or more a day Can walk up stairs (but probably not down)	May start exploring genitals Draws a straight line Names several body parts.
21 Months	Can walk up stairs Able to set simple goals (e.g., deciding to put a toy in a certain place).	Throws a ball overhand Kicks ball forward Stacks six blocks.	Names simple picture in a book Can walk down stairs.
22 Months	Kicks ball forward Follows two-step requests (e.g., "Get your doll and bring it here")	Does simple puzzles Draws a straight line Names several body parts.	Puts on loose-fitting clothes Might be ready for a big bed Understands opposites (e.g., tall vs. short).
23 Months	Names simple picture in a book Uses 50 to 70 words.	Opens doors Sings simple tunes Takes more of an interest in playing with other kids.	Begins to understand abstract concepts (e.g., sooner and later) Becomes attuned to gender differences Learns to jump.
25- 26 Months	Stacks six blocks Walks with smooth heel-to-toe motion.	Uses pronouns (e.g., I, me, you) Washes and dries own hands	Speaks clearly most of the time Draws a vertical line
27 - 28 Months	Jumps with both feet Opens doors	Understands descriptions (e.g., big, soft) Draws a vertical line	Starts to recognize ABCs Balances on one foot
29 - 30 Months	Brushes teeth with help Washes and dries own hands Draws a vertical line.	Draws a circle Balances on one foot	Puts on a T-shirt Names one color Names one friend
31 - 32 Months	Recites own name Draws a circle.	Puts on a T-shirt Balances on each foot for a second Recognizes ABCs Brushes teeth by herself	Uses two adjectives Draws a cross Points to objects described by use
33 - 34 Months	Names one color Names one friend Carries on a simple conversation.	Alternates feet going up and down stairs Uses prepositions (e.g., on, in, over) Speaks clearly most of the time (75 percent can be understood) Stacks eight blocks	Is toilet trained during the day Wiggles thumb Expresses a wide range of emotions Draws a stick figure.

Child's Age	Mastered Skills (most kids can do)	Emerging Skills (half of kids can do)	Advanced Skills (a few kids can do)
35 - 36 Months	Describes how two objects are used Uses three to four words in a sentence Names two actions (e.g., skipping, jumping)	Hops and skips Follows a two- or three-part command Separates fairly easily from parents Rides a tricycle	Balances on each foot for three seconds Gets dressed without help

Ask Your **Doctor**

PMJF Lion Prof. **Dr.K.GIREESH**
M.D.(Gen Med)., DM., (Neurology).,
M.ch. (Neurosurgery)
Neurophysician & Neurosurgeon

Q. My child has difficulty in walking. An MRI spine showed diastematomyelia. What is to be done further doctor and please tell me about this condition.
Mr. Arun.L, Erode.

Ans. Diastematomyelia describes a congenital split cord malformation in which the spinal cord is longitudinally divided into two "hemicords," each surrounded by its own dural tube and separated by a midline bony or cartilaginous ridge. The term originates from the greek diastema, meaning cleft, and melos, meaning medulla. Diastematomyelia differs from diplomyelia, a similar entity in which the split spinal cord is enveloped in a single dural tube separated by a nonrigid, fibrous median septum. In diastematomyelia, each hemicord has only one set of dorsal and ventral nerve roots compared to the complete duplication of paired nerve roots associated with diplomyelia. Seventy percent of cases of diastematomyelia occur in the lumbar spine, although cases involving the cervical spine and skull base have been reported.

Diastematomyelia tends to be diagnosed early in life and is more common in females than males. Numerous physical findings raise the suspicion of a split cord malformation in children: Cutaneous stigmata, including a tuft of hair (hypertrichosis); pigmented nevi (capillary hemangiomas); dimples; and open sinus tracts along the lumbar spine. Orthopedic deformities of the feet (pes equinovarus) and spine (scoliosis) are also associated with diastematomyelia. Split cord malformations also occur in babies with spina bifida aperta (myelomeningocele and meningocele). In addition to these physical findings, patients present with an array of neurological complaints and findings: unilateral or bilateral lower extremity weakness; back or leg pain; and dysfunction of the bowel, bladder or both.

Multiple imaging modalities can help diagnose diastematomyelia. Both prenatally and infants, ultrasonography is useful for identifying a split cord, septum, or hydromyelia. This imaging modality is especially valuable for evaluating babies without open spina bifida.

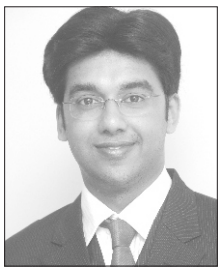
Plain radiographs of the spine are abnormal in approximately 60% of patienys and may demonstrate findings such as a bifid lamina, widened interpedicular distance, bony medial septum, scoliosis, and bifid vertebra. Computed tomography (CT) is also very helpful, particularly when performed as part of myelography. In one study, CT myelography was best at identifying the type of split cord malformation. Magnetic resonance imaging (MRI) is of great value as well. In addition to visualization of the split cord, MRI details other important diagnostic findings: myelomeningoceles, meningoceles, lipomas, a thickened filum terminale, hydromyelia, split vertebra, and a rigid median septum. The location of the conus medullaris is also clearly identifiable on MRI.

Diastematomyelia is thought to result from abnormal movement and separation of the primitive cells that compose the spinal cord. In fact, the split cord malformations of diastematomyelia and diplomyelia (spinal cord duplication) are classified with the other human dysraphic malformations of the central nervous system. Diastematomyelia is not included in the family of neural tube closure defects, but folate deficiency during pregnancy has been linked to these other related disorders.

The natural history of diastematomyelia indicates that patients ultimately become symptomatic and may not improve neurologically, even after surgical repair. Consequently, neurosurgeons agree that surgical intervention should be performed even in the absence of symptoms. Surgery includes microsurgical removal of the bony septum with a high-speed drill and tethering of the spinal cord which indicated. The spinal cord, which was originally enclosed in two separate dural sheaths, is meticulously closed as a single sac. Minor postoperative complications, such as a cerebrospinal fluid leak, transient lower extremity paresis, wound infection, urinary retention, and pseudomeiningocele, occur in more than 20% of patients. Death is an extremely rare surgical complication. Studies have reported that approximately 23% of operated patients improve and 65% remain neurologically stable. Of operated asymptomatic patients, only 1 of 15 patients was reported to be neurologically worse after surgery.

DISCIPLINING CHILDREN

Dr. Kannan Gireesh. M.D.



How do you discipline a child of this age?

Ages 0 to 2

Babies and toddlers are naturally curious, and the best way to discipline a young child is to eliminate temptations. A child who has been hitting, bitting, or throwing food, should be told why that behaviour is unacceptable. Try to calm him for a minute or two.

Never a spank, hit or slap a child of any age. Babies and toddlers are especially unlikely to be able to make connection between their behavior and physical punishment. They will only feel the pain. Do not forget that children learn by watching you. Make sure that your behavior is perfect as it has a strong impact on the child's behavior.

Ages 3 to 5

As your child grows, he begins to understand the connection between actions and consequences. It is important to explain to him what you expect of him before you punish him for a certain behavior. For instance, the first time your child uses crayons to decorate the living room wall, you should discuss why that is not allowed and what will happen if it's done again. Explain to him that he will have to help keep the walls clean. If he repeats this act again, you should remind him that crayons are for paper only and then enforce the consequences.

is easier for parents to ignore bad behavior occasionally. It is important for you as parents to decide together what the rules are and then be consistent in upholding them. There should be clarity on what behavior will be punished; do not forget to reward good behavior. Discipline is not just about punishment. Parents need to remember to recognize and reward good behaviour as well.

Ages 6 to 8

Timeouts and consequences are effective discipline strategies with this age group. Consistency important at this stage. The child should be made to believe that you mean what you say.

You should try and follow through with what you say. Be careful not to make unrealistic threats of punishment in anger, since not following through will put you in the difficult position of not being able to carry out your threat. Severe punishments may be counter-productive. The child may not feel motivated to change his behavior.

Ages 9 to 12

The child in this age group, just as with all ages, can be disciplined with natural consequences. As matures and requests for more independence and responsibility, teaching him to deal with consequences of his behavior is an effective and appropriate disciplining technique. For example, if your child has not done his homework before bedtime and goes to school without it the next day, he faces the consequences. He will realize automatically what behaving improperly can mean, and probably not make those mistakes again. However, if your child does not seem to be learning from natural consequences, you should set up your consequences to help him modify his behavior more effectively.

Ages 13 and above

By now your child knows what is expected of him and knows that you mean what you say about the consequences of bad behavior. Don't let down your guard now, as discipline is just as important for teens as it is for younger children. Make sure to set up rules regarding homework, visits by friends, and discuss them beforehand with your teenager so that there will be no misunderstandings. He will probably complain from time to time, even as you grant him greater freedom and responsibility.

When your child does break a rule, taking away privileges may seem to be the best plan of action. It is also important to give a teenager some control over his life. It will help him to respect the decisions you

Postal Registration Number: TN/CCN/550/11-13
R.DIS.no. 1282 / 2010,R.N.I.no. TN ENG/2011/38850

make for him.

What is positive discipline?

The key to success is for parents to establish their authority over the child without putting them on the offensive and getting into a power struggle. Children, just like other people, do not react well to taking orders. The instinct is to rebel and the parent's automatic reaction is to exert further pressure. The child must get the message that discipline is for his own good.

Many a time, children distract their parents with their naughtiness and disobedience. On Such occasions, parents may see no other option but to give the children a good spanking. While this does not cause serious damage if it is a rare occurrence, it has been observed that children whose parents discipline them by hitting, nagging or shouting at them on a regular basis, have a tendency to be more violent and aggressive than other children who are disciplined through other means.

Another important thing that parents should keep in mind is that when they rebuke their child, they should make them understand that it is a specific behavior that is under critism and not the child himself. The child must feel that he is not a bad person, but that he has not behaved correctly in a particular situation

How to deal with a stubborn child?

Stubbornness in children has always been viewed as a negative trait by parents. But maybe they should attempt to look upon it in a more positive fashion. stubbornness. Stubbornness can have a range of causes. It may vary from irrational fears to resistance to change or just a simple attack of rebellion. Do not get angry or argue with them. Simply state your stand, the reasons for it and the consequences of disobedience. Then follow through. If the issue is not A child's stubbornness may just be his way of demonstrating that he can think for himself. Stubbornness gives him a feeling that he has a measure of control over the situation, which in turn, boosts his self-esteem. Parents should also make an effort to understand the root of their children's serious, there is no harm negotiating with your child and arriving at a compromise. In some situations, it may be more effective to just let go without any opposition.

Some useful tips

- v Identify the problem and involve your child in seeking a solution. In this way he will feel that you are on his side.
- v If you want your child to do something, try to time your request so that it does not interrupt him while he is doing something else. This is one way of avoiding a conflict.
- v If your child is not very happy about a change, give him adequate notice so that he knows what to expect and is willing to cooperate.
- v Be assertive when asking your child to do something. You are not asking him for a favour. Also, make clear the consequences of non-compliance.

Keep in mind that your requests should be reasonable. Praise your child when he is cooperative and well behaved.

Owned and Published by: Dr.Kannan Gireesh

Printed by : S. Bakthan, Printed at : Devi Suganth Printers,

17, Jani Batcha Lane, Royapettah Chennai-14.

Published at : 432/753, Poonamallee High Road,

Kilpauk, Chennai - 10, **Editor : Dr.Kannan Gireesh**

R.N.I.no. TN ENG/2011/38850 - Posted on Dt. 17-4-2012

Registered newspaper Posted at Egmore RMS Patrika Channel