"THE EFFICACY OF THERMOSPOT IN DETECTING NEONATAL HYPOTHERMIA COMPARED TO RECTAL TEMPERATURE"

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ABSTRACT

Background:

Hypothermia during the newborn period is widely regarded as a major contributory factor of significant morbidity and mortality in developing countries. High prevalence of hypothermia has been reported from countries with the highest burden of neonatal mortality, where hypothermia is increasingly gaining attention and significance as a critical intervention for newborn survival. Use of a simple, cheap device like thermospot which gives continuous monitoring of neonatal temperature, which could be used even by illiterate care givers is the need of the hour and this study emphasizes the effectiveness of such a simple device in detecting hypothermia in newborn babies compared to standard rectal temperature.

Objectives:

To determine the efficacy of thermospot in detecting neonatal hypothermia in comparison with standard rectal temperature.

Materials and Methods:

This is a prospective study conducted in the Department of pediatrics, at R.L. Jalappa hospital and Research centre attached to Sri Devaraj Urs Medical College, Tamaka, Kolar from May2012 to May 2013. All newborns delivered at R.L.Jalappa hospital and who were shifted to mother side were taken up for the study. After taking consent, Thermospot was attached to right hypochondrium of the neonate and colour of thermospot along with rectal temperature readings were

checked twice a day for the first three days. Thermospot turns green if the temperature is above 35.5˚c. If the temperature falls below 35.5˚c it turns black. Comparison was made between the rectal temperature readings and colour of the thermospot.

Results:

A total of 500 neonates were included in the study. Out of the expected 3000 rectal temperature recordings, a total of 2520 rectal temperature readings were taken and compared with the colour of thermospot. Among 500 neonates 269 were males and 231 were females and 421 babies belonged to term gestational age.

Among 2520 rectal temperature readings, hypothermia with temperature less than $35.5^{o}C$ was recorded 226 times and the thermospot was found to be Black in 219 occasions indicating hypothermia. A total of 7 times even when the temperature was <35.5 ^{o}C, the thermospot was green. The study showed a sensitivity of 96.9% and a Specificity of 99.8% by thermospot in detecting neonatal hypothermia compared to rectal temperature.

Conclusion:

The Thermospot was found to be highly effective in detecting neonatal hypothermia compared with rectal temperature. Thus the study emphasizes the need to use a simple device like thermospot for monitoring temperature in newborns especially in resource poor settings.

Key words: Thermospot, Hypothermia, Rectal temperature, Neonates.

ABBREVATIONS

Gm	Grams
IUGR	Intrauterine Growth Restriction
Kg	Kilogram
LBW	Low Birth Weight
CMR	Child Mortality Rate
IMR	Infant Mortality Rate
WHO	World Health Organisation
UNICEF	United Nations International Children's Fund
SRS	Sample Registration System
DT	Digital Thermometer

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INTRODUCTION

Maintaining an adequate body temperature is essential for human survival, yet infants are born with significant thermal challenges. Due to their body proportions and immature thermoregulatory systems, human infants are substantially dependent on caregivers to help them maintain thermal balance. Thermoregulation of infants is achieved through both physiological processes and through the thermal care behavior of their caregivers.

Ensuring that an infant maintains an adequate temperature involves an interaction of a) the infant's internal state and ability to thermoregulate, b) its caregiver's ability to interpret the infant's thermal needs, and c) the caregivers beliefs regarding correct thermal care of infants and their thermal care priorities for a given set of environmental conditions.

Child mortality rate (CMR) and infant mortality rate (IMR) are the two most important key indicators of the health status of children in any country. As per the Sample Registration System (SRS 2008) of India the IMR in India is declining at a slow rate of 2.11% per year, and at the current rate, India can expect to see an IMR of 47 deaths per 1000 live births by 2015.[1]

Three causes accounted for 78% (0·79 million out of 1·01 million) of all neonatal deaths in India: 1) Birth asphyxia and birth trauma 2) Prematurity and low birth weight; 3) Neonatal infections, comprising neonatal pneumonia, neonatal sepsis, and CNS infections. Baqui et al conducted verbal autopsy to study rates, causes and

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timings of neonatal deaths in Uttar Pradesh.[2] They found that the primary cause of death on day 0 of life were birth asphyxia or injury (31%) and preterm birth (26%). Prematurity (37.5%) and sepsis (25%) were main causes of death on day 1 of life. Half of all neonatal deaths occurred by day 3 of life.

Hypothermia during the newborn period is widely regarded as a major contributory factor of significant morbidity and mortality in developing countries.[3] Newborns in general and preterm infants in particular are prone to excessive heat loss because they have a relatively large surface area in relation to body mass and the surface to mass ratio is particularly high in low birth weight babies.[4] High prevalence of hypothermia has been reported from countries with the highest burden of neonatal mortality, where hypothermia is increasingly gaining attention and significance as a critical intervention for newborn survival. The World Health Organization (WHO) adopted thermal control among the essential components of newborn care.[5]

Most high-risk babies are born in the home in low resource communities where the burden, health impact, and associations of hypothermia with newborn care practices and health outcomes have been insufficiently documented.[6] Smaller studies in both urban slums and the rural community in India have reported on the incidence of hypothermia[7], but large population-based investigations of the timing of episodes, cumulative incidence of neonatal hypothermia, and seasonality of risk among babies born at home have not been conducted.

In developing countries a mercury-in-glass thermometer is usually used to measure temperature of newborn infants. More recently, World Health Organization

has recommended the use of low-reading thermometer to detect hypothermia in newborn infants. Unfortunately, the low-reading variety is difficult to obtain in many parts of the developing countries. The other problems are this instrument is fragile, can not be sterilized and difficult to use without proper training.[8]

Thermospot which is a liquid crystal thermometer could be used as it gives a continous monitoring of temperature and easily available and affordable.[9] Use of a simple , cheap device like thermospot which gives continuous monitoring of neonatal temperature , which could be used even by illiterate care givers is the need of the hour and this study emphasizes the effectiveness of such a simple device in detecting hypothermia in newborn babies compared to standard rectal temperature.

OBJECTIVE OF STUDY

1. To determine the efficacy of thermospot in detecting neonatal hypothermia in comparison with standard rectal temperature.

REVIEW OF LITERATURE

HISTORICAL BACKGROUND:

Tarnier was an obstetrician in Paris who first applied modern concepts of incubation to human infants starting around 1830.[10,11] Tarnier's incubator, the couveuse, has been widely recognized as the first one designed specifically to care for premature babies. Tarnier and his student Budin , studied premature human incubation into the next century, reporting almost doubled survival in infants born at less than 2 kg. In the United States, commercialization of Tarnier's and Budin's designs occurred, and the Rotch Incubator appeared at the Colombian Exposition in Chicago in 1893.[12,13] Thereafter, in 1933 Blackfan and Yaglou[14] provided humidity along with air warming within incubators, which improved the stability of infant temperature control.

In the 1940s Chappel in Philadelphia added air isolation techniques to incubator care to prevent neonatal septic infections recognized to occur more frequently in humid environments.[15] In 1958, Silverman and associate challenged the need for humidity in incubators and used higher air temperatures than previously reported to care for an ever smaller premature population surviving with modern techniques

DEFINITION OF HYPOTHERMIA:

Neonatal hypothermia is defined as an abnormal thermal state in which newborns body temperature drops below 35.5˚c.WHO categorized hypothermia into 3 stages based on core temperature, prognosis and action required.[16]

1. Cold stress: 36 to 36.4˚c,cause for concern, warm the baby and seek to identify Cause.

2. Moderate hypothermia: 32to35.9˚c, danger, immediate warming needed

3. Severe hypothermia: LESS than32˚c, grave, skilled care is urgently needed.

THERMOREGULATION IN FETUS:

The fetus generates heat during metabolism with cellular proliferation and differentiation, maintenance of intra and extracellular ion gradients, and transport of nutrients and wastes across cell membranes. Cardiac and skeletal muscle work also generates heat in utero.[17] Fetal ovine and human studies suggest that the rate of fetal heat production is about 33 to 47 cal/kg/minute.[17,18] Fetal-maternal temperature gradients in mammals and humans have demonstrated that a difference in temperature of only 0.45°C to 0.50°C between the umbilical arterial and venous blood is sufficient to eliminate the majority of metabolic heat via the placental circulation i.e., by forced convective transfer into the mother's uterine circulation.[19] Probably less than 10% to 20% of heat is dissipated from the fetal skin into the amniotic fluid

THERMOREGULATION IN NEWBORN INFANT:

Thermal adaptation is one of the prime adjustments a newborn infant has to undergo in the extra-uterine life right from birth. The fetus does not have a system for temperature regulation and is poikilothermic which means that it adapts to the temperature of the mother. As a result the fetal central and extremities temperatures are the same and have a value determined by the central temperature of the mother. A newborn baby is physiologically homeothermic (can maintain stable body

temperature that is warmer than the environmental temperature) and tachy -metabolic that is the basal metabolic rate is several times higher than poikilothermic animals. The normal range of core body temperature for a newborn infant is 36.5 ^{0}C- 37.4 ^{0}C regardless of weight and gestation.

Mechanism of heat loss/Heat exchange:

Heat exchange between the baby and the environment occurs through the skin and to some extent through the respiratory tract. Infant loses heat with every gram of water evaporated from the body surface or the respiratory tract.

Heat exchange through skin takes place through Conduction, Evaporation, Radiation and Convection. The exchange is modulated by ambient temperature, humidity, wind, solar exposure, sky and ground radiation, posture, clothing and so on. Enormous amount of heat loss occurs soon after birth when infant's body is covered with amniotic fluid, through evaporation. Heat loss on direct contact with cold surfaces such as cold clothing, tray etc can cause heat loss by conduction. Likewise heat gain occurs in Kangaroo mother care by direct skin to skin contact of the baby and mother. Convection currents can cause some cooling in the baby in delivery room and postnatal ward if precautions are not taken to prevent draughts of cold air. Exposure to cold walls, large windows can lead to loss of heat by radiation. Similarly, babies can gain heat under radiant warmer or with any other external heat source.

Heat losses lead to increased metabolic rate and is reflected in an increase in oxygen consumption. Newborn babies have large body surface area per unit body mass. Compared to that of an adult for example the body mass of a newborn

baby is only 5% where as the body surface area is 15% to that of an adult. Therefore in a newborn baby heat loss is at least four times per unit body mass as compared to that of an adult. It is therefore important to keep the oxygen consumption at minimal basal level. The limitations of thermoregulatory control are due to inherent capacity to generate heat and to environmental factors limiting heat transfer and heat exchange.[20]

Thermoneutral Zone:

The thermoneutral zone for newborn is been defined as the range of ambient temperature at which metabolic rate is at a minimum and within which temperature regulation is achieved without changes in metabolic heat production or evaporative heat loss.[21] In the unclothed resting adult the lower range of thermoneutral range is 26-28[0]C but it is 32-35[0]C in the naked full term newborn.[22] The lower end of thermoneutral range varies with increasing postnatal age and size of the baby. Several investigators have demonstrated that oxygen uptake which is directly related to thermogenesis is much higher at 23 [0]C than at 28 [0]C or at 32 – 35[0]C even during the first few hours of life. Maximum thermogenesis determines the lower limit of thermoregulatory range. When ambient temperature continues to remain below this point   hypothermia sets in. Adamson et al found that the oxygen consumption began to rise when the gradient between skin and environmental temperature exceeded 1.5[0]C.[23]

The control of body temperature also depends on an integrated system which consists of sensors, central regulating system and effector components.[24]

Sensors:

The external sensors or thermo-receptive structures are basically the Cutaneous thermo-sensors and the internal structures are hypothalamus, lower brain stem and spinal cord. Thermal sensors have also been found in the dorsal wall of the abdominal cavity and in the musculature.

Cutaneous Thermal receptors:

They are fine unmyelinated nerve endings present into the basal layer of the epidermis. These endings contain numerous mitochondria, providing energy for a temperature sensitive Na+, K+ pump which transduces cold stimulus into an electrical signal. There is scarcely any area on the body surface which does not respond to cold but the number of cold spots/cm2 is found to be more on the face than on the palms and soles.

Internal Thermoreceptors:

Anterior Hypothalamus and Preoptic area have been identified to be thermo sensitive structures but the warm sensitive cells are more than cold sensitive cells. Midbrain and Medulla Oblongata are comparatively less thermo-sensitive than the Hypothalamus where as Spinal Cord has been found to be extremely sensitive.

Afferent Pathways:

These are thin myelinated and unmyelinated axons which belong to Group 3 and group 4 nerves. They enter through the dorsal root ganglion, cross over to contralateral side and ascend within the spinothalamic tract in the anterolateral section. The fibres join the medial leminiscus and then project in to the

Hypothalamus. Some cutaneous thermal sensors are connected via the spinoreticular pathway to the reticular formation from where it is projected to the Hypothalamus. The spinal cord thermal sensors are connected to the posterior hypothalamus via anterolateral pathway in the spinal cord.

Central regulating mechanism (Integration of the thermal inputs):

The Posterior Hypothalamus has mainly the thermoresponsive cells which respond to changes in temperature of distant structures but not to changes in their own temperature. Anterior hypothalamus and Preoptic area also have some thermo responsive cells.

Efferent Pathway:

The thermoregulatory effector responses include: Thermogenesis, Skin blood flow changes, Sweat secretion and behavioral responses. This is carried out mainly by nervous system via the somatomotor system and the sympathetic System. The whole effort is towards maintenance of the desired set point by regulating heat production and heat loss. This set point is the core body temperature routinely measured within the tympanic canal, the rectum or the esophagus.

Response to cold environment occurs through physiological and behavioral measures.

Physiological: There is extra heat production through shivering and non shivering thermo genesis.

Nonshivering thermogenesis:

Non shivering thermogenesis is the main mechanism of heat production in human neonates. It results from the metabolic activity in a specialized organ of heat production that is brown adipose tissue.[25]

In the newborn infants brown adipose tissue is found superficially in the interscapular region, at the nape of the neck, axillae, groin and deep around kidneys and adrenals. It is characterized by presence of a large number of mitochondria, many fat vacuoles and increased vascular supply as compared to the white fat.

Non shivering thermogenesis is controlled from the hypothalamic Ventromedial nucleus through sympathetic nervous system.[26] It releases norepinephrine which acts on the adrenergic β-receptors located in the cell membrane and activates a cascade of reactions that splits triglycerides into glycerol and nonesterified fatty acids (NEFA). The NEFA is oxidized, re-esterified to triglycerides or released in to the circulation. This oxidation process has been found to be highly exothermic process with generation of heat which is distributed to the various parts of the body through blood stream.

Immediately after birth newborn is exposed to cold delivery room temperature. This mechanism of exposure to cold air and oxygen from room air stimulates the sympathetic nervous system to release norepinephrine. Norepinephrine in turn induces brown adipocytes to activate adenyl cyclase. This leads to increase in cytoplasmic cyclic adenosine phosphate (CAMP) that causes phosphorylation of hormone sensitive lipase. Lipase initiates lipolysis and energy production. An intracellular

uncoupling protein UCP1 or thermogenin is needed to release energy as heat during lypolysis. Prostglandin E2 and adenosine produced by placenta inhibit this process and cytoplasmic cAMP facilitates release of heat. Decrease in the level of PGE2 and adenosine following clamping of the cord takes away the inhibition on non shivering thermogenesis in the newborn infant. Thyroid hormone has also been shown to play a role in development of brown tissue and UCP production. Non shivering thermogenesis may persist for 3-6 months of life.

Shivering has been observed in human neonate with severe hypothermia at birth but it occurs at much lower temperature than that in adults. It is controlled by the somatomotor system. The descending axons from the Posterior hypothalamus project to the reticular formation of the midbrain and Pons. There they contact supraspinal pathways and descend to the motor nucleus of the anterior horns of the spinal cord.

The motor nerves that leave the anterior root give signals for the rhythmic contraction of the muscles. The inhibitory influence of shivering is exerted mainly by the spinal cord warm receptive structure. The cervical spinal cord is the region that preferentially receives the heat generated in the interscapular brown adipose tissue and so the shivering remains suppressed.

Vasomotor Response:

Constriction of skin blood vessels occurs in response to cold both in full term and pre term infants. This is to increase the internal temperature gradient thereby increasing tissue insulation to maximum.

Behavioral:

These have not been clearly understood. The newborn infants may continue to sleep when cold. However they may show signs of thermal discomfort, sleep less to increase heat production. They may adopt a flexed posture in an attempt to decrease heat loss.

Significance of understanding Thermal adaptation:

The baby is typically born into a wet and cold environment (comfortable for adults).Under normal delivery room conditions fall in deep body and skin temperatures are about $0.1^{o}C$ and $0.3^{o}C$ per minute respectively.[24] This corresponds to heat loss of approximately 200cal/kg/min. In addition the deep body temperature of the newborn is higher by $0.5^{o}C$ at the time of birth compared to later in life. Furthermore infant loses heat if necessary steps are not taken to ensure that the infant is received on a warm cloth, placed on a warm surface, room temperature maintained at least $26^{o}C$ and cold draughts of air are avoided.

Essential Newborn care by WHO also includes maintenance of warm chain through out the neonatal period.[27] The 10 steps of warm chain are: Warm delivery room($26^{o}C$),warm resuscitation, immediate drying, skin to skin contact between the baby and mother, breastfeeding, postponement of bathing and weighing, appropriate clothing and bedding, mother and baby together, warm transport, and training of health care providers.

STUDIES ON HYPOTHERMIA:

The experiments on human infants started with the use of incubators to regulate environmental temperature. The first incubator was introduced in 1835 by Von Ruehl in St. Petersburg, Russia.[28] This generated the interest to gather information on temperature regulation in newborn infants. Response to cooling of the environment in poikilothermic animals such as the newborn rat and mouse was studied by Fairfield in 1948 and Fitzgerald in 1953.[29]

The metabolic rate, effect of environmental temperature on metabolism and temperature maintenance in newborn pig was studied by Mount in 1958.They studied the rate of rise in oxygen consumption with fall in environmental temperature in newborn piglet. A quantitative estimate of the changes in O2 consumption and respiratory minute volume in the neutral environment was studied in newborn rabbit by Adamson's in 1959.[23]

Studies from India on hypothermia have reported varying but significant incidence of hypothermia. Table 1 gives the findings of these studies from India.

Table 1: Studies on neonatal hypothermia from India

Author	Methods of assessment	Personnel & site of study	No of babies	Time of assessment	Remarks
Singh M et Al [30]	Palpation of foot & Abdomen by back of hand /palm Simultaneous local temperature recorded by Electronic thermometer	Pediatrician/ TCH	50	Postnatal Period	20% had cold stress but 1 had core temperature < 36 °C
Green , Kumar & Khanna [3]	Thermo spot On abdomen Simultaneous recording with Digital thermometer	Local volunteers/ Urban Slums	32	Every day from 1to 7 days	Prevalence of Hypothermia 4% Sensitivity 88% Specificity 97%
Kumar & Aggarwal [31]	Touch of abdomen, Simultaneous axillary temperature	Mother & Field worker	189	Within 24 hours	32% hypothermic(<36.50C) 24.6% mothers and 34.4% field workers correctly identified hypothermia
Aggarwal et al [32]	Human Touch , simultaneous axillary DT	Trained nonmedical field investigator	148	Within 48 hours, Day 7,30,60	74% sensitivity, 96% specificity to detect hypothermia <36.50C
Kumar & Agarwal [33]	Axillary temperature	Field worker/ Home delivered Newborns	189	Within24 hours	11.1% Hypothermic <36.5 °C
Pejaver, Nisarga& Gowda [34]	Thermospot, Simultaneous rectal temperature	Maternity ward	20	For 5 days	310/313 in agreement with rectal temperature
Bang et Al [7]	Axillary temperature by thermometer	Trained village health workers / Home delivered newborns	763	8 visits from day 1to 28	80% hypothermia on day 1 of life
Kaushik et Al [35]	Axillary temperature	Mother and Resident on duty, Medical College	2063	Within one hour of birth then 12 hourly till discharge	11% in babies >2500grams (<35 °C)

An observational study was conducted nested in the parent trial in Shivgarh village of Uttar Pradesh, North India over a period of one year.[36] Continuous ambulatory recording was done in home delivered newborn infants during routine activities such as bathing, breast feeding, changing soiled diapers etc. The study highlights factors that lead to interruption of warm chain during routine newborn care.

Delivered on to ground (85.3%), body not wiped(81.6%), lies uncovered for >60 min(67.5%), bathed and scrubbed within 24 hours(88.6%), bathed 3-4 times in a week, messaged uncovered (89.5)%, massaged >3 times a week (49.8%),and prelacteal feeds given (80%) were the important factors noted by these researchers. This study however did not look at the cold stress experienced by newborns by simultaneous recording of core and peripheral temperature.

Table2 : Studies on Hypothermia from other countries

Author	Location	Method of assessment	No of babies	Time of assessment	Remarks
Byaruhanga et al.[37]	Uganda	Rectal <36.5 °C All newborns Hospital	300	10, 30, 60, 90 min postpartum	Incidence was found to be 29, 82, 83 and 79 % at each time point
Johanson et al[38]	Nepal	Uncomplicated newbornsHospital Rectal Temp <36 °C	500	At 2 h after birth	Incidence of hypothermia85%
Nayeri and Nili[39]	Iran	All newborns Hospital Rectal temp <36.5 °C	940	After birth (mean 20 min)	53.3% Incidence
Andersonet al[40]	Nepal	Uncomplicated newborns Hospital (nursery) Nepal Rectal <35.5 °C	31	Longitudinal measurements(mean of 5.6 measurements per infant)	81% Incidence

INCIDENCE OF HYPOTHERMIA:

The incidence of hypothermia has been estimated both among hospital and home-born newborns in low resource settings in India, Iran , Uganda and Nepal, as well as in other tropical climates in developing countries. In one village-based study in India, 11% of 189 neonates were found to be hypothermic (<35.6 1C) based on a single temperature reading taken within the first 24 h after birth.

Only 58% of newborns were wiped soon after delivery, the head was covered in 59% in winter and 11% in summer, no baby was kept skin-to-skin, and the room temperature was <24 1C in 41% of households.[31] In Gadchiroli, India, body temperatures were recorded in the home throughout the neonatal period, and 80% of hypothermia cases (axillary temperature <35 ^{o}C) occurred on the first day.[7] Among infants who are diagnosed with hypothermia in the days or weeks following birth, their hypothermia is often secondary, that is, a symptom of sepsis or other infection.[7]

SEASONALITY:

Seasonal variation in ambient temperature leads to variation in the incidence of hypothermia. A study in northern India reported a 70% incidence of hypothermia among newborns during January to March, 20% during April to June, 32% in July to September and 55% in October to December. Seasonal hypothermia rates were not significantly different for LBW compared with normal weight infants in warmer months, but significant differences were found during the colder months.[41] Bang et al.[7] reported similar variations from central India (21.5% incidence in the winter versus 13.8% in summer using a definition of hypothermia as <35 1C). In the northern Indian state of Haryana, newborns born at home had an incidence of hypothermia of 19.1% in the winter months, but only 3.1% in the summer. However, in the summer, 36.8% of newborns were hyperthermic.[31]

RISK FACTORS FOR HYPOTHERMIA:

a. Low birth Weight: More than 20 million infants worldwide, representing 16% of all live born infants, are born with LBW, 96% of them in developing countries. These rates are likely to underestimate the true magnitude of the problem, as more than half of infants in the developing world are not weighed. The incidence of LBW in many developing countries is as high as 30% or more.[42] Additionally, in these settings, birth weight is not perceived to be an important determinant of newborn health, therefore LBW babies may not receive appropriate care, thus aggravating the risk. Christensonet al.[43] reported a statistically significant association between admission weight and rectal temperature of newborns. In Tanzania, the odds ratio of hypothermia among LBW newborns was 11.0, compared with normal weight newborns.[44]

b. **Risk factors related to domiciliary care**: Approximately half of women in low- and middle-income countries deliver at home, with most deliveries conducted by traditional birth attendants and relatives.[45] Caregivers have limited understanding of the special thermal care needs of the newborn, and often perceive newborn thermal care requirements as similar to those of adults. Many practices adopted during delivery and the early neonatal period inadvertently expose the newborn to higher risk of hypothermia, thus compounding the baseline risk already present due to inherent physiological susceptibility during this period.

c. Delivery and immediate newborn care: The delivery room, which later serves as the postnatal confinement room, is usually an unused and secluded portion of the home with inadequate arrangements to ensure warmth and prevent drafts of air. In

South Asia, the room is often plastered with fresh cow dung or clay, which cools it further. As the risk to the mother's life is perceived to be higher, it is a common practice to focus attention primarily on the mother until the delivery of the placenta, while the newborn is left unattended, sometimes on the ground, leading to prolonged exposure.[46] Immediate drying and wrapping of the baby is not a common practice, and leads to further heat loss.[46] Early bathing is common, sometimes with vigorous scrubbing of the skin to remove the vernix, especially when local knowledge dictates that the vernix is a 'dirty' or polluting substance. Forceful removal of vernix disrupts the skin barrier, and leads to skin cooling due to increased transepidermal water loss through the compromised skin barrier.[47]

d. **Postnatal confinement:** Postnatal confinement is a common practice in most parts of South Asia and sub-Saharan Africa to seclude the mother from the newborn during the period of ritual pollution, to promote bonding between the mother and baby, and to protect the newborn against malefic influences such as the evil eye and evil spirits.[46] Confinement is observed for varying lengths of time across different cultures, often for the first 40 days and is most stringent during the early neonatal period.[46] It takes the following forms: (1) minimizing movement   outside the home and contact with male members of the household; and (2) sleeping where birth took place on a temporary bed on the floor, rather than in the mother's bedroom. Temporary   arrangements for sleeping with limited insulation pose an additional risk for hypothermia. The room is often inadequately lit, which makes it difficult to spot danger signs. Moreover, the practice of confinement is a significant barrier to access to health care.

e. **Massage:** Oil massage is a routine newborn care practice in much of South Asia and sub-Saharan Africa as a local strategy for maintaining health, including thermal protection. However, newborns are unwrapped and exposed to the environment during massage. Mustard oil, which is the most commonly used oil in South Asia, has been shown to damage skin barrier function, leading to increased trans epidermal loss of water and heat.[48] Although massage with certain emollients may be beneficial, frequent and prolonged environmental exposure during massage could result in cold stress. Thus, care needs to be taken to limit exposure during the massage process.

f. **Breastfeeding:** Delaying initiation of breastfeeding for 2 to 3 days and discarding of the colostrum is common practice in many communities in low resource settings.[49] In addition to sacrificing the stimulation to metabolism that comes from breastfeeding, delayed breastfeeding significantly reduces skin contact with the mother and further increases the risk of hypothermia.

g. **Risk during transport:** Transport of the newborn is a significant source of cold exposure. Evidence from studies on neonatal transport between wards within hospitals suggests that even in such controlled settings, risk of hypothermia during transport is high.[50] It is a common observation in developing countries that preterm and high-risk infants are referred soon after birth, rather than in utero. This practice further aggravates the risk of cold exposure among rural populations who live far from health centers and have limited access to modern transportation.

h. **Care in health facilities:** Studies on the knowledge and practices of health professionals in low resource settings regarding thermal control of newborns revealed

widespread prevalence of several high-risk practices in health facilities: inadequate warmth in delivery rooms, improper or delayed drying and wrapping of the newborn, bathing immediately after birth, reduced and delayed contact with the mother and delayed initiation of breastfeeding.[51,52] Health providers had insufficient knowledge regarding the physiology of thermoregulation in newborns, methods of correct measurement of temperature, definition of neonatal hypothermia, prevention and management of hypothermia and its associated risks.[51,52] Moreover, correct knowledge did not always translate into practice or institutional policies. Arrangements for management of hypothermic and LBW babies were either absent or inadequate. Electricity supply problems were common, and incubators, even if present, were dysfunctional.

DETECTION OF HYPOYHERMIA:

Until the development of the clinical thermometer, human touch remained the only mode of thermometry and still continues to play an important role in temperature detection throughout the world. Various studies done on the efficacy of human touch in detecting hypothermia found that use of touch underestimated hypothermia. A possible explanation could lie in the superior ability of human touch to detect fever compared with hypothermia.

Table 3 : Studies on Detection of Hypothermia

Author	Location	Sample Size	Definition of Hypothermia	Technique	Results
Singh et al.[30]	Indian hospital	50	Skin <36.5 °C	Palpation of forehead, abdomen and foot by pediatricians	Sensitivity-96% (forehead), 83% (abdomen),98% (foot); specificity not reported
Bolam et al.[53]	Nepalese Hospital	250	Axillary temperature <36°C	Foot palpation by hospital health workers	Sensitivity-11–42%; Specificity-93–100%
Kumar et al.[33]	Rural India	189	Axillary <36.5 °C	Touch of abdomen by mothers and community health workers (CHWs)	Sensitivity-25% (mothers) and 34% (CHWs); Specificity-97% (mothers) and 96% (CHWs
Agarwal et al.[4]	Rural India	500	Axillary <36.5 °C	Touch of abdomen and soles of feet by a field supervisor	Sensitivity-74% Specificity-96.7%

	Indian urban slum	32 (180 paired) measurements	Axillary <36.5 °C	ThermoSpot on Abdomen	Sensitivity-88%; specificity-97%
Green et al.[3]					
Pejaver, Nisarga & Gowda[34]	Indian Hospital	20(313 measurements)	Rectal <35.5 °C	Thermospot on Abdomen	Sensitivity-92%; specificity-98%
Kennedy et al.[54]	Malawian hospital	10 (100 paired Measurements)	Rectal <35.5 °C	ThermoSpot on axilla	Sensitivity-100%; specificity-99%

The results of various studies indicate a poor co-relation between human touch and hypothermia detection. WHO recommends the use of a low-reading mercury-in-glass thermometer, but it is fragile and difficult to obtain in many parts of the world.

Thermo spot (Liquid Crystal Thermometry):

A Thermo Spot indicator invented by John Zeal is a small circle of tough, flexible plastic the size of a small coin. Its back is self-adhesive and its front—before use - resembles a simple black circle 12 millimeters across. In fact the black surface is suffused with a sophisticated temperature-sensitive liquid crystal compound. In a liquid crystal, selective light scattering occurs at specific wave length. The wave length of maximum scattering changes inversely with temperature, thus, an appropriately calibrated strip liquid crystal appears to light up according to the temperature.[55] The thermo spot can be placed over axilla , right hypochondium , left supra clavicular area and forehead. If the Thermo Spot is accidentally removed before the examination is completed, it can be reattached using a peace of tape.

At 35.5°C the dark side begins to turn green and a smiling face will become visible. At 36.5–37.4°C a bright green face will be clearly seen. As the temperature drops below 35.5°C, the smiling face will fade away completely. A new Thermo Spot will not react in any way when stuck on an adult's body. Adults don't emit enough heat unless they are febrile. To demonstrate function, an adult can stick a disk in the centre of the palm of one hand and rub it vigorously with a finger of the other hand. Then, the Thermo Spot will change colorist is simple, safe,   provides continuous temperature monitoring and can be used even by unlettered caregivers. Data on impact of the device on care practices in rural India is forthcoming.[36] Various studies showed that the most accurate results with use of this device were obtained when the case definition of hypothermia was lowered thus increasing specificity. The efficacy of thermo spot in detecting hypothermia was found to be significant in various studies.[3, 34, 54]

PREVENTION OF HYPOTHERMIA:

Prevention and management of hypothermia in low resource settings must focus on simple and effective interventions combined with behavior change and training. Practical guides, including the WHO Mother–Baby Package[5] and the WHO Thermal Protection of the Newborn[27] provide recommendations to all levels of the health system and its providers. Various interventions for prevention and management of hypothermia have been tested in community as well as hospital settings, and have added to the existing evidence base.[48, 56, 57]

A)Warm chain: The 'warm chain'[27] is a set of 10 interlinked procedures to be taken at birth and during the following few hours and days to prevent hypothermia by

minimizing heat loss in all newborns. Failure to implement any one of these procedures will break the chain and put the newborn baby at risk of hypothermia. The 10 steps of the 'warm chain' are as follows: (1) warm delivery room, (2) immediate drying, (3) skin-to-skin contact, (4) breastfeeding, (5) bathing and weighing postponed, (6) appropriate clothing/ bedding, (7) mother and baby together, (8) warm transportation, (9) warm resuscitation and (10) training and awareness raising.

B) Proper wiping and wrapping: Immediately following birth, newborns must be carefully wiped, dried and covered to prevent heat loss through evaporation of the amniotic fluid.[5,43] Proper wiping and drying was found to prevent significant drops in temperature in the first 2 h after birth.[58] Head caps, especially woolen ones, are recommended for all babies, and the infant should be dressed and wrapped warmly when not in the skin-to-skin position. The newborn should be properly wrapped, and tight swaddling is not recommended due to possible adverse effects.

C) Kangaroo Mother Care: Skin-to-skin care has shown promising results for prevention and management of hypothermia for both low and normal birth weight babies in hospital as well as community settings. Kangaroo Mother Care refers to the technique of prolonged, continuous STSC between mothers and their LBW infants in the hospital and after discharge. The practice of Kangaroo Mother Care in hospitalized LBW infants has been associated with a number of benefits, and is now considered to be at least as good as standard care with incubators.[59] Besides improved thermoregulation of the newborn, other potential benefits include improved maternal–infant bonding, more rapid transition to physiological stability following birth, reduced crying and longer periods of alertness, improved breastfeeding and growth,

reduced incidence of serious bacterial infections and earlier discharge from hospital.[60] STSC was shown to be at least as effective as incubator care for the management of hypothermia in normal birth weight neonates in hospital settings.[61]

Encouraging results from hospital based studies have led to the introduction of variants of Kangaroo Mother Care in community settings with widespread acceptance. In a community-based study of STSC in rural India, the practice was introduced as a universal strategy for all newborns regardless of birth weight, with multiple benefits and no reported adverse effects.[41] STSC is also recommended during postnatal transport.

D) Breastfeeding: Exclusive breast feeding prevents hypothermia by various ways which includes heat exchange between newborn and mother, and provision of calories from fat, the process of suckling, which occurs with greater frequency in breastfed as compared with bottle-fed newborns, increases energy expenditure, stimulating basal metabolic activity and thus aiding thermoregulation.[62,63] Breastfeeding also prevents bacterial infection,[62] thereby preventing a common cause of secondary hypothermia.

E) Synthetic external insulation :Various synthetic wraps, bags, boxes and covers have been found to prevent heat loss in the newborn, and are particularly effective when used immediately after delivery. A Cochrane review of polyethylene and polyurethane bags and wraps showed that they resulted in significantly lower rates of hypothermia among infants <32 weeks gestation.[47,64] Many of these bags and plastic sheets are locally available at low cost in low resource settings.

F) Topical agents and oil massage: The application of topical agents, including paraffin[48, 65]petrolatum, mineral oil and lanolin,[48] or corn, sunflower, sesame or safflower oil,[47,48,66] have been shown to reduce trans epidermal water loss and as well as loss of heat. This is especially relevant for preterm newborns with an immature skin barrier. Vegetable oils can potentially augment nutrition and possibly aid in skin barrier development by the   transcutaneous uptake of lipids. Randomized trials among neonates are few, but Fernandez et al.[66] in India showed that corn oil improved thermoregulation of infants. Although hypothermia was not a primary outcome in a study of sunflower seed oil massage in Egypt, the application improved skin condition among preterm infants.[67] In randomized, controlled trials in hospitals in Egypt and Bangladesh,   sunflower seed oil applications reduced the incidence of neonatal sepsis by about 40 to 50%,[67] and in Bangladesh they reduced the risk of mortality by 26%.[68] Thus, evidence   exists to promote the use of this highly cost effective intervention in hospitalized, preterm infants <33 weeks gestational age in low resource   settings. However, further research is needed on the impact of this intervention in all newborns (that is, both term and preterm infants) in the hospital, and no data exist on the impact of this intervention in community settings. Promotion of this intervention should include education for the community and health providers on maintenance of the warm chain and preservation of vernix during massage.

MATERIALS AND METHODS

The cases in the present study were taken from the wards of department of Paediatrics, R L Jalappa Hospital and Research Centre, attached to Sri Devaraj Urs Medical College which is a constituent college under Sri Devraj Urs academy of higher education and Research tamaka Kolar. Study period was from MAY 2012 to MAY 2013. 500 newborn cases were taken for the study, carefully monitored for the temperature and thermo spot color change.

Source of data

All the cases were taken from the pediatrics ward, R L Jalappa Hospital and Research Centre, attached to Sri Devaraj Urs Medical College which is a constituent college under Sri Devraj Urs academy of higher education and Research tamaka Kolar were closely monitored for temperature and thermospot colour change.

Inclusion criteria:

Term, pre-term and post-term neonates delivered at R.L.Jalappa hospital and research centre.

Exclusion criteria:

Neonates admitted to NICU.

Method of collection of data:

The study was prospective in nature, in which 500 newborn babies from May 2012 to May 2013 were included. Parents of neonates under study were informed and after getting an informed consent, the thermo spot is placed over the neonates right

hypochondrial region and the colour of the thermo spot along with rectal temperature is measured two times a day.

Thermo spot Readings:

- Thermospot is a 12 mm plastic disc, black in appearance with two white dots on top and its back is self adhesive.

- At 35.5°C the dark side begins to turn green and a smiling face will become visible. At 36.5–37.4°C a bright green face will be clearly seen. As the temperature drops below 35.5°C, the smiling face will fade away completely.

Colour	Temperature range	Manufacturer instructions
😀 (green)	> 36.5 °C	Body temperature in 'safe zone'
😀 (brown)	35.5-36.4 °C	Seek advice if the 'smiling face' begins to fade or reverts to black
😀 (black)	< 35.5 °C	Seek advice if the 'smiling face' begins to fade or reverts to black

- Thermo Spot discs were attached to the abdomen over the right hypocondrium because they were not easily removed and the measured temperature may represent the central temperature.

- The area of skin, on which Thermo Spot to be attached, was sterilized using 70% alcohol-soaked cotton before it was attached and sometime was allowed to let the area dry.

- If the Thermo Spot is accidentally removed before the examination is completed, it can be reattached using a peace of tape.

- The Thermo Spot reading was done at the time when the rectal temperature was measured. The nursing staff noticed the color of thermospot, whether the Thermo Spot color was green with clear smiling face, pale green with unclear smiling face or dark without smiling face.

Rectal Temperature Measurement:

- The rectal temperature was measured using mercury in glass thermometer.
- The rectal mercury-in-glass thermometer was lubricated with a water-soluble lubricant and inserted to a depth of 2-3 cm and left for 3 min.[69]
- Care was taken in each case to prevent breakage of the thermometers
- Rectal measurements were carried out by nursing staffs trained to do so without causing any injuries or discomfort to the study group.

Comparison is made between the rectal temperatures with the colour change in thermo spot to determine the accuracy of thermo spot in detecting hypothermia.

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RESULTS

A prospective clinical study was undertaken in neonates admitted to the post natal wards to study the efficacy of thermospot in detecting hypothermia compared to standard rectal temperature. A total of 500 babies were taken into the study. The expected number of rectal temperature readings were 3000, but a total of 2520 readings were taken and corresponding Thermospot color were noted. Reasons include Discharge before the end of study period and parental refusal for subsequent rectal temperature recording.

Table 4 : Distribution of Sex

Gender of Baby	Frequency	Percent
Male	269	53.8
Female	231	46.2
Total	500	100.0

The table above shows that the majority of neonates under study were males with a frequency of 53.8%.

Graph 1 : Distribution of Sex

Gender (n=500)
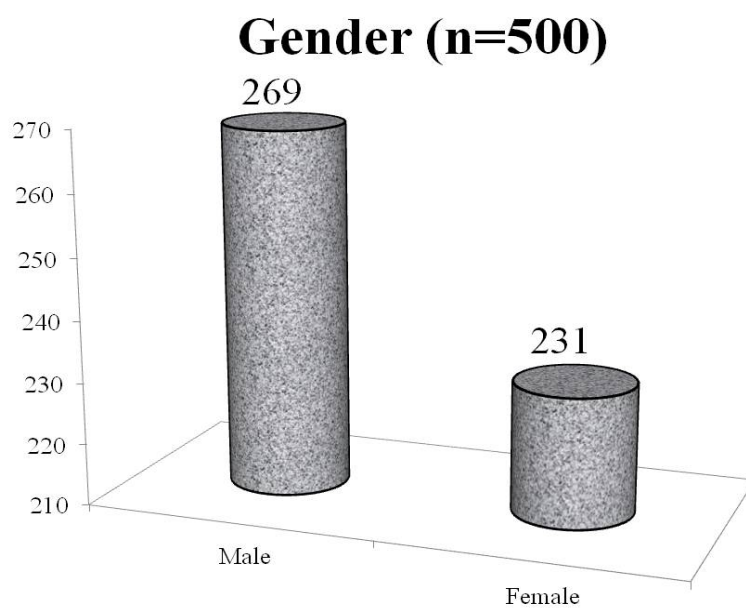
Table 5 : Distribution of Gestational Age

Gestational Week	Frequency	Percent
<=37 Wk	75	15.0
37.1-42.0 WK	421	84.2
>42.0 WK	4	0.8
Total	**500**	**100.0**

The table above shows that majority of neonates belonged to term gestational age with a percentage of 84.2%.

Graph 2 : Distribution of Gestational Age

Gestational age (n=500)
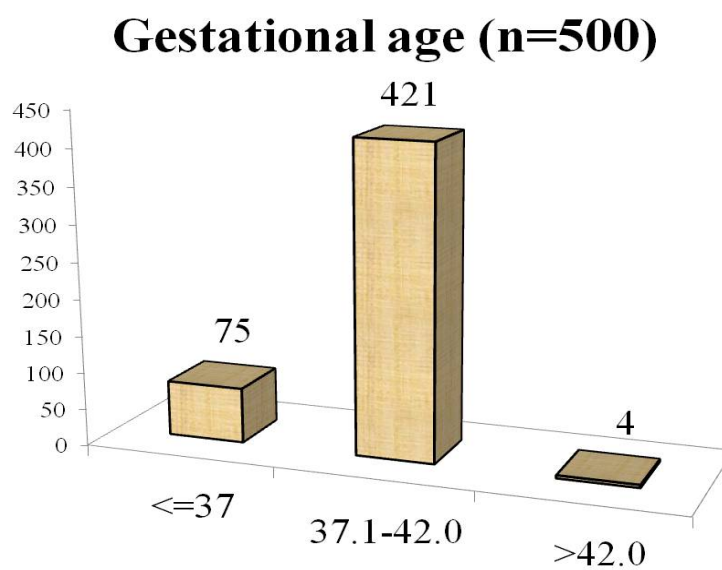
Table 6: Distribution of Weight

Birth Weight	Frequency	Percent
<2 kg	43	8.6
2.0-2.5 kg	143	28.6
2.51-3.00 kg	194	38.8
>3.00 kg	120	24.0
Total	**500**	**100.0**

The table above shows that out of 500 babies 43 babies were less than 2 kg, 143 babies were between 2 – 2.5 kg, 194 babies were between 2.5 – 3 kg , 120 babies were above 3kg.The majority of babies were seen between 2.5 – 3 kg.

Graph 3 : Weight distribution

Birth weight (n=500)
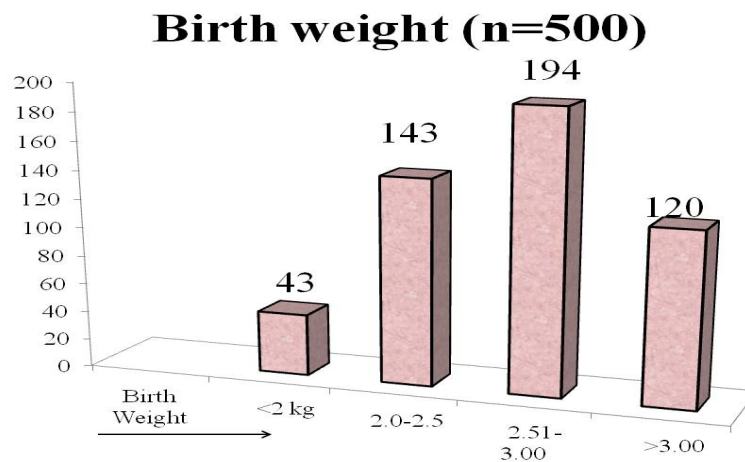
Table 7: Comparison of color of Thermospot with Rectal temperature measurements

	Temp		Total
Color of Thermospot	<35.5	>=35.5	
	219	5	224
	97.8%	2.2%	100.0%
Black			
	96.9%	0.2%	8.9%
	7	2289	2296
Green	0.3%	99.7%	100.0%
	3.1%	99.8%	91.1%
Total	226	2294	2520

Sensitivity=96.9% Specificity=99.8% NPV=99.7% PPV=97.8% Accuracy=99.5%

The table above shows that out of 2520 temperature readings,

a) 224 times the Thermospot was black and 219 times it corresponded to rectal temperature readings less than 35.5 with a positive predictive value of 97.8%.

b) 2296 times the Thermospot was green and only 7 times the temperature was less than 35.5, which corresponds to negative predictive value of 99.7%.

Graph 4 : Comparison between color of Thermospot and Rectal temperature
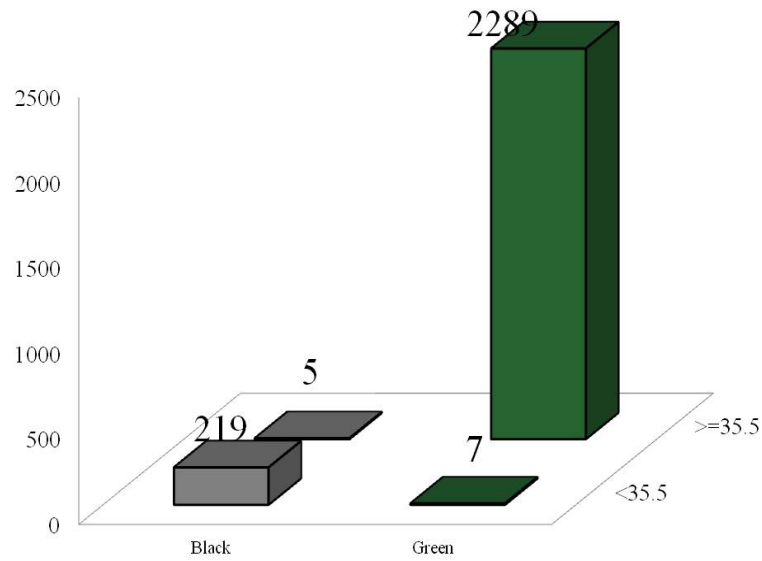
Graph 5: Color of thermospot

Total thermospots n=2520
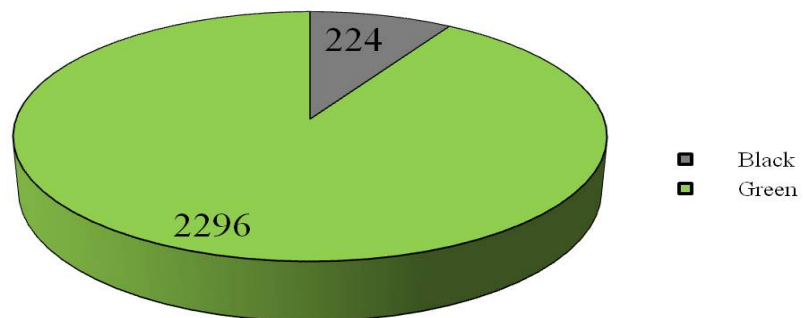
Graph 6: Thermospot Green Vs Rectal temperature.

Thermospot green
n=2296

7

2289

■ <35.5
■ >=35.5
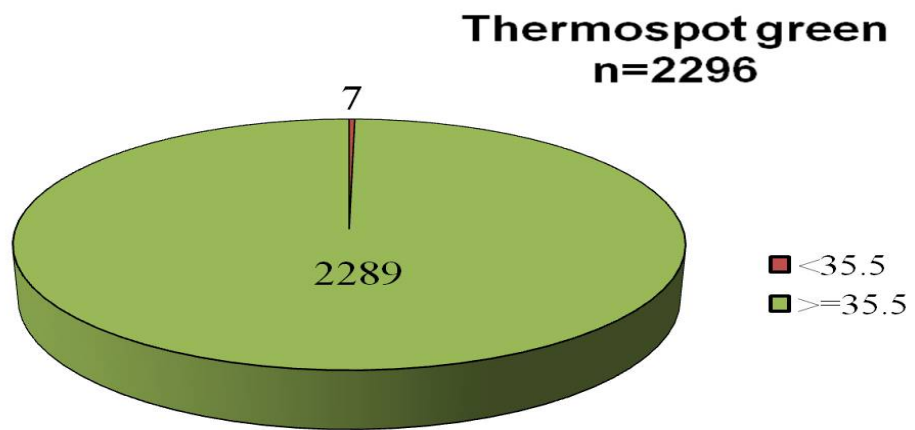
Table 8 : Comparison of color of Thermospot and rectal temperature D1 of Life morning

Color of Thermospot- Day 1 Morning	Temp -Day 1 Morning		Total
	<35.5	>=35.5	
Black	84	0	**84**
	100.0%	0%	**100.0%**
	95.5%	0%	**16.8%**
Green	4	411	**415**
	1.0%	99.0%	**100.0%**
	4.5%	100.0%	**83.2%**
Total	88	411	**499**
	17.6%	82.4%	**100.0%**
	100.0%	100.0%	**100.0%**

Sensitivity=95.5% Specificity=100.0% NPV=99.0% PPV=100.0% Accuracy=99.2%

The table above shows that

a) Out of 84 times when Thermospot was black ,84 times the rectal temperature were less than 35.5 corresponding to positive predictive value of 100%.

b) Out of 415 times when Thermospot was green ,411 times the rectal temperature were more than 35.5 and 4 times temperature was less than 35.5 corresponding to a negative predictive value of 99%.

Table 9 : Comparison of color of Thermospot and rectal temperature D1 of Life evening

Color of Thermospot- Day 1 evening	Temp -Day 1 Evening		Total
	<35.5	**>=35.5**	
Black	63	1	**64**
	98.4%	1.6%	**100.0%**
	96.9%	.2%	**13.3%**
Green	2	417	**419**
	0.5%	99.5%	**100.0%**
	3.1%	99.8%	**86.7%**
Total	65	418	**483**
	13.5%	86.5%	**100.0%**
	100.0%	100.0%	**100.0%**

Sensitivity=96.9% Specificity=99.8% NPV=99.5% PPV=98.4% Accuracy=99.4%

The table above shows that

a) Out of 64 times when Thermospot was black ,63 times the rectal temperature were less than 35.5 corresponding to positive predictive value of 98.4%

b) Out of 419 times when Thermospot was green ,417 times the rectal temperature were more than 35.5 and 2 times temperature was less than 35.5 corresponding to a negative predictive value of 99.5%. .

Table 10 : Comparison of color of Thermospot and rectal temperature D2 of Life morning

Color of Thermospot- Day 2 Morning	Temp -Day 2 Morning		Total
	<35.5	>=35.5	
Black	32	2	**34**
	94.1%	5.9%	**100.0%**
	100.0%	.5%	**7.8%**
Green	0	403	**403**
	.0%	100.0%	**100.0%**
	.0%	99.5%	**92.2%**
Total	32	405	**437**
	7.3%	92.7%	**100.0%**
	100.0%	100.0%	**100.0%**

Sensitivity=100.0% Specificity=99.5% NPV=100.0% PPV=94.1% Accuracy=99.3%

The table above shows that

a) Out of 34 times when Thermospot was black ,32 times the rectal temperature were less than 35.5 corresponding to positive predictive value of 94.1%

b) Out of 403 times when Thermospot was green , all 403 times the rectal temperature were more than 35.5 corresponding to a negative predictive value of 100%.

Table 11 : Comparison of color of Thermospot and rectal temperature D2 of Life evening.

Color of thermospot- Day 2 Evening	Temp -Day 2 Evening		Total
	<35.5	**>=35.5**	
Black	26	2	**28**
	92.9%	7.1%	**100.0%**
	96.3%	.5%	**7.2%**
Green	1	362	**363**
	.3%	99.7%	**100.0%**
	3.7%	99.5%	**92.8%**
Total	27	364	**391**
	6.9%	93.1%	**100.0%**
	100.0%	100.0%	**100.0%**

Sensitivity=96.3% Specificity=99.5% NPV=99.7% PPV=92.9% Accuracy=98.7%

The table above shows that

a) Out of 28 times when Thermospot was black , 26 times the rectal temperature were less than 35.5 corresponding to positive predictive value of 92.9%

b) Out of 363 times when Thermospot was green , 362 times the rectal temperature were more than 35.5 corresponding to a negative predictive value of 99.7%.

Table 12: Comparison of color of Thermospot and rectal temperature D3 of Life morning.

Color of thermospot- Day 3 Morning	Temp -Day 3 Morning		Total
	<35.5	>=35.5	
Black	5	0	5
	100.0%	.0%	100.0%
	100.0%	.0%	1.4%
Green	0	350	350
	.0%	100.0%	100.0%
	.0%	100.0%	98.6%
Total	5	350	355
	1.4%	98.6%	100.0%
	100.0%	100.0%	100.0%

Sensitivity=100.0% Specificity=100.0% NPV=100.0% PPV=100.0%
Accuracy=100.0%

The table above shows that

a) Out of 5 times when Thermospot was black ,all 5 times the rectal temperature were less than 35.5 corresponding to positive predictive value of 100%

b) Out of 350 times when Thermospot was green , all 350 times the rectal temperature were more than 35.5 corresponding to a negative predictive value of 100%.

Table 13 : Comparison of color of Thermospot and rectal temperature D3 of Life evening.

Color of thermospot-Day 3 evening	Temp -Day 3 Evening		Total
	<35.5	>=35.5	
Black	9	0	**9**
	100.0%	.0%	**100.0%**
	100.0%	.0%	**2.5%**
Green	0	346	**346**
	.0%	100.0%	**100.0%**
	.0%	100.0%	**97.5%**
Total	9	346	**355**
	2.5%	97.5%	**100.0%**
	100.0%	100.0%	**100.0%**

Sensitivity=100.0% Specificity=100.0% NPV=100.0% PPV=100.0% Accuracy=100.0%

The table above shows that

a) Out of 9 times when Thermospot was black ,all 9 times the rectal temperature were less than 35.5 corresponding to positive predictive value of 100%

b) Out of 346 times when Thermospot was green , all 346 times the rectal temperature were more than 35.5 corresponding to a negative predictive value of 100%.

Table 14 : Comparison between gestational age and the rectal temperature

Day		Gestational Week	Temperature					Chi square Value	p value
			<35.5	%	>=35.5	%	Total		
			n		n		n		
Day 1	Morning	<=37 Wk	42	56.0%	33	44.0%	75	89.441	<0.001
		>37 Wk	46	10.8%	378	89.2%	424		
	Evening	<=37 Wk	33	44.0%	42	56.0%	75	71.115	<0.001
		>37 Wk	32	7.8%	376	92.2%	408		
Day 2	Morning	<=37 Wk	20	26.7%	55	73.3%	75	50.089	<0.001
		>37 Wk	12	3.3%	351	96.7%	363		
	Evening	<=37 Wk	18	24.7%	55	75.3%	73	44.001	<0.001
		>37 Wk	9	2.8%	309	97.2%	318		
Day 3	Morning	<=37 Wk	3	4.3%	66	95.7%	69	5.329	0.021
		>37 Wk	2	0.7%	284	99.3%	286		
	Evening	<=37 Wk	8	11.6%	61	88.4%	69	28.445	<0.001
		>37 Wk	1	0.3%	285	99.7%	286		
Total	Morning	<=37 Wk	65	29.7%	154	70.3%	219	120.77	<0.001
		>37 Wk	60	5.6%	1013	94.4%	1073		
	Evening	<=37 Wk	59	27.2%	158	72.8%	217	124.44	<0.001
		>37 Wk	42	4.2%	970	95.8%	1012		
	Total	<=37 Wk	124	28.4%	312	71.6%	436	245.01	<0.001
		>37 Wk	102	4.9%	1983	95.1%	2085		

The above table shows that 28.4% of babies born before 37 weeks of gestational age had temperature reading less than 35.5 compared to 4.9% of babies born more than 37 weeks of gestational age. The table also indicates a statistically significant co – relation between gestational age and rectal temperature readings.

Table 15 : Comparison between birth weight and rectal temperature.

Day		Temp	Birth Weight								Total	Chi square Value	'p' value
			<2 kg		2.0-2.5 kg		2.51-3.00 kg		>3.00 kg				
			n	%	N	%	n	%	N	%			
Day 1	Morning	<35.5	37	42.0%	36	40.9%	11	12.5%	4	4.5%	88	180.389	<0.001
		>=35.5	6	1.5%	106	25.8%	183	44.5%	116	28.2%	411		
	Evening	<35.5	26	40.0%	29	44.6%	8	12.3%	2	3.1%	65	115.028	<0.001
		>=35.5	17	4.1%	110	26.3%	182	43.5%	109	26.1%	418		
Day 2	Morning	<35.5	16	50.0%	12	37.5%	4	12.5%	0	.0%	32	70.238	<0.001
		>=35.5	27	6.7%	126	31.0%	160	39.4%	93	22.9%	406		
	Evening	<35.5	18	66.7%	8	29.6%	1	3.7%	0	.0%	27	96.095	<0.001
		>=35.5	25	6.9%	120	33.0%	141	38.7%	78	21.4%	364		
Day 3	Morning	<35.5	5	100.0%	0	.0%	0	.0%	0	.0%	5	36.797	<0.001
		>=35.5	38	10.9%	118	33.7%	123	35.1%	71	20.3%	350		
	Evening	<35.5	8	88.9%	1	11.1%	0	.0%	0	.0%	9	51.344	<0.001
		>=35.5	35	10.1%	117	33.8%	123	35.5%	71	20.5%	346		

The above table shows that babies with birth weight less than 2 kg had a greater percentage of temperature readings less than 35.5 on all 3 days. The table also indicates a statistically significant co – relation between birth weight and rectal temperature readings.

DISCUSSION

In our prospective study, we have studied the efficacy of thermospot , a liquid crystal device in detecting hypothermia compared to standard rectal temperature. We have taken normal neonates admitted to wards irrespective of the weight and whose parents gave consent for recording rectal temperature and for the placement of thermospot.

Neonatal hypothermia is defined as an abnormal thermal state in which newborns body temperature drops below 35.5˚c.WHO categorized hypothermia into 3 stages based on core temperature, prognosis and action required.[16]

1. Cold stress: 36 to 36.4˚c,cause for concern, warm the baby and seek to identify Cause

2. Moderate hypothermia: 32to35.9˚c, danger, immediate warming needed

3. Severe hypothermia: LESS than32˚c, grave, skilled care is urgently needed.

Table 16: **PREVELENCE OF HYPOTHERMIA**

Author	Population	Definition	Prevalence
Present Study	**Uncomplicated Newborns**	**Rectal Temperature <35.5° C**	**8.96%**
Kumar and Aggarwal[33]	All Newborns	Axillary Temperature<36.5 °C	11.1%
Darmstadt et al[41]	All Newborns	Axillary Temperature <36.5 °C	45%
Kaushik et al[35]	All Newborns	Axillary Temperature <35 °C	2.9%
Green et al [3]	All Newborns	Axillary Temperature <35 °C	4%
Nayeri and Nili[39]	All Newborns	Rectal Temperature <36.5° C	53.3%
Anderson et al[40]	Uncomplicated Newborns	Rectal Temperature <35.5° C	81%
Johanson et al[38]	Uncomplicated Newborns	Rectal Temperature <35.5° C	85%

In the present study, the prevalence of hypothermia was found to be 8.96%.A study done by Anderson et al[40] on uncomplicated neonates with similar criteria for defining hypothermia showed a prevalence of 81% which is not in agreement with the present study.

Prevalence of hypothermia was found to be high in various studies done by Nayeri and Nili[39], Anderson et al[40] and Johanson et al[38] where rectal temperature was used in defining hypothermia.

The prevalence was found to be low in our study compared to other study as our study involved a serial measurement of readings over a duration of three days

while in other studies such as Nayeri and Nili[39] and Johanson et al[38], the rectal temperature readings were taken immediately after birth and at 2 hours of birth.

In studies done by Green et al [3] and Kaushik et al[35], the prevalence of hypothermia was as low as 2.9% as the cutoff taken for defining hypothermia was low.

TABLE 17 : EFFICACY OF THERMOSPOT

Author	Sample Size	Definition of Hypothermia	Technique	Results
Present Study	500 (2520 paired measurements)	Rectal Temperature <35.5 °C	Thermospot on right hypochondrium	Sensitivity-96.9% Specificity-99.8%
Green et al.[3]	32 (180 paired) measurements	Axillary temperature <36.5 °C	ThermoSpot on Abdomen	Sensitivity-88%; specificity-97%
Pejaver, Nisarga& Gowda[34]	20(313 measurements)	Rectal temperature <35.5 °C	Thermospot on Abdomen	Sensitivity-98.2%; specificity-99.4%
Kennedy et al.[54]	10 (100 pairedMeasurements)	Rectal temperature <35.5 °C	ThermoSpot on axilla	Sensitivity-100%; specificity-99%

The present study showed a sensitivity of 96.9% and specificity of 99.8% by thermospot in detecting hypothermia compared to standard rectal temperature. The present study is in agreement with other studies done by Pejaver et al[34] and Kennedy et al[54] where rectal temperature was used in defining hypothermia similar to our study, which showed high sensitivity and specificity of thermospot in detecting hypothermia.

In developing countries, hypothermia is identified only when it is already in extreme condition. Several conditions may contribute to this situation, such as lack of incubator with servo control, inadequate nursing staff, lack of awareness of the important of temperature control, shortage of clean and warm linen, unavailability of affordable thermometers and frequent breakages of thermometers. Therefore, it is needed to find an alternative temperature detector which is simple, affordable and can be used by mothers and other caregivers.[55,70] Our study has shown that Thermospot is a valid method to diagnose hypothermia in neonates.

The present study also showed a statistically significant ('p'value - <0.001) co-relation between gestational age at birth and birth weight with rectal temperature readings which is evident by the fact that preterm babies are more prone for hypothermia compared to term newborns. Christensson et al.[43] reported a statistically significant association between admission weight and rectal temperature of newborns. In Tanzania, the odds ratio of hypothermia among LBW newborns was 11.0, compared with normal weight newborns.[44]

Our study also showed that 67.69% of the rectal temperature readings that were found to be <35.5 $^{\circ}$C occurred on first day of life, which is in agreement with the fact that the newborns are more prone of hypothermia immediately after birth and during the first few hours after birth as shown in various studies.[38,39]

CONCLUSION

The present study can be concluded with following observations:

- It was observed that the prevalence of hypothermia was 8.96% among the admitted neonates.

- Thermo spot is highly efficacious with high sensitivity and specificity in detecting neonatal hypothermia..

- Preterm and Low birth weight babies were more prone for hypothermia.

- It was also observed that 67.69 % of hypothermia readings were during first day of life indicating the need for effective thermal protection measures immediately after birth and during first 24 hours of life.

SUMMARY

- Hypothermia during the newborn period is widely regarded as a major contributory factor of significant morbidity and mortality in developing countries.

- High prevalence of hypothermia has been reported from countries with the highest burden of neonatal mortality, where hypothermia is increasingly gaining attention and significance as a critical intervention for newborn survival.

- Our study is a prospective study done in 500 neonates to detect the efficacy of thermo spot in detecting neonatal hypothermia compared to standard rectal temperature.

- The prevalence of hypothermia was found to be 8.96% in our study.

- The present study showed that thermo spot is highly efficacious in detecting neonatal hypothermia with high sensitivity and specificity. Use of a simple , cheap device like thermo spot which gives continuous monitoring of neonatal temperature , which could be used even by illiterate care givers is the need of the hour and this study emphasizes the effectiveness of such a simple device in detecting hypothermia in newborn

- Our study showed a statistically significant co-relation between hypothermia and gestational age and birth weight of the baby indicating that hypothermia was found to be more common in preterm babies and low birth weight babies.

- The study also showed that hypothermia was more prone during the first day of life indicating the need for effective thermal protective measures.

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ANNEXURE

PROFORMA

Study on Efficacy of Thermo spot

Name of Mother: Age:

Name of Father: Age:

Maternal Details:

Married Life: Consanguinity:

Booked and Immunized: Yes / No

Blood Group: Obstetric Score:

Maternal Complications: Yes / No

If yes Specify:

Drug H/O:

Baby Details:

D.O.B: Gestational Age:

Mode of Delivery: NVD / LSCS

If LSCS indication:

APGAR Score:

Anthropometry: Wt - Length-   HC-

CVS: HR-   PP-   CFT-   SPO2-

RS: RR-   A/E-   Chest Retractions-

P/A: Umbilical A/V-   Distension-

CNS: Spontaneous Eye Opening-

             Spontaneous Limb Movements-

Cry-   Suck-   Activity-   Neonatal Reflexes-

INFORMED CONSENT

We the attender's have been explained in detail the procedure involved in the study and the uses of the study. We hereby give our whole hearted consent for the study to be conducted in our baby.

Signature

Day of Life	Time	Colour of Thermospot	Rectal Temperature
Day 1 of Life	Morning		
	Evening		
Day 2 of Life	Morning		
	Evening		
Day 3 of Life	Morning		
	Evening		

MASTER CHART

Sl No	Name	Age	Consanguinity of marriage	Obs score	Complication	DOB	Mode of delivery	Sex	Gestational age	APGAR 1 min	APGAR 5 min	Birth weight	D1OL Morning Color	D1OL Morning Temp	D1OL Evening Color	D1OL Evening Temp	D2OL Morning Color	D2OL Morning Temp	D2OL Evening Color	D2OL Evening Temp	D3OL Morning Color	D3OL Morning Temp	D3OL Evening Color	D3OL Evening Temp
1	Nirmala	26	NCM	G3P1L1A1	NIL	11/6/12	LSCS	M	39 WEEKS	7/10	8/10	2.9 KG	G	36.6	G	36.5	G	36.8	G	36.5	G	36.6	G	36.8
2	VEENA	25	NCM	G2P1L1	NIL	11/6/12	NVD	F	40 WEEKS 1 DAY	5/10	6/10	3.3 KG	G	36.2	G	36.6	G	36.6	NR	NR	NR	NR	NR	NR
3	ASHA	24	II CM	PRIMI	NIL	12/6/12	NVD	F	40 WEEKS 2 DAY	7/10	8/10	2.9 KG	G	36.4	G	36.5	G	36.7	G	36.6	NR	NR	NR	NR
4	SOWMYA	20	NCM	PRIMI	SEVERE PRE ECLAMPSIA	13/6/12	NVD	M	39 WEEKS	8/10	9/10	2.6 KG	G	36.6	B	35.4	G	36.5	G	36.8	G	36.8	G	36.7
5	LAVANYA	22	NCM	G2A1	NIL	13/6/12	LSCS	M	40 WEEKS 1 DAY	7/10	8/10	2.9 KG	G	36.1	G	36	G	36.8	G	36.6	G	36.6	G	36.7
6	LAKSHMI	20	II CM	PRIMI	NIL	14/6/12	NVD	M	40 WEEKS 2 DAYS	7/10	8/10	2.7 KG	G	36	G	36.1	G	36.7	NR	NR	NR	NR	NR	NR
7	NAGASHREE	24	NCM	G2P1L1	NIL	14/6/12	NVD	M	39 WEEKS 4 DAYS	7/10	9/10	2.5 KG	B	35.2	G	36.2	G	36.7	G	36.6	G	36.6	G	36.8
8	KRISHNAVENI	26	NCM	PRIMI	NIL	14/6/12	NVD	F	36 WEEKS	7/10	9/10	2.42 KG	G	36	G	36.2	G	36.6	G	36.7	NR	NR	NR	NR
9	PREMA	22	II CM	PRIMI	NIL	14/6/12	LSCS	F	41 WEEKS	7/10	9/10	2.52 KG	G	36.2	G	36.2	G	36.5	G	36.4	G	36.7	G	36.4
10	ANITHA	32	NCM	G4P3L3	ANTEPARTUM ECLAMPSIA	15/6/12	LSCS	F	40 WEEKS 1 DAY	7/10	8/10	2.42 KG	G	36.4	G	36.6	G	36.7	G	36.6	G	36.7	G	36.5
11	HEMAVATHI	25	NCM	G2P1L1	NIL	15/6/12	NVD	M	37 WEEKS	8/10	9/10	2.45 KG	G	36.3	B	35.3	G	36.8	G	36.8	G	36.4	G	36.6
12	SUNITHA	25	NCM	G2P1L1	HIV +VE, SEV PRE ECLAMPSIA	15/6/12	LSCS	F	41 WEEKS	8/10	9/10	2.5 KG	G	36.6	G	36.5	G	36.8	G	36.4	G	36.7	G	36.8
13	GIRIJA	23	NCM	PRIMI	NIL	18/6/12	NVD	F	40 WEEKS 2 DAYS	6/10	7/10	2 KG	B	35.4	B	35.4	G	36.6	G	36.3	G	36.6	B	35.3
14	SHOBA	21	II CM	PRIMI	NIL	18/6/12	NVD	M	39 WEEKS	7/10	8/10	2.7 KG	G	36.5	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR
15	SHAMALA	21	NCM	PRIMI	NIL	19/6/12	NVD	M	36 WEEKS	8/10	9/10	2.3 KG	G	36.3	B	35.3	G	36.7	G	36.4	NR	NR	NR	NR
16	NAGAMANI	20	NCM	PRIMI	NIL	19/6/12	NVD	M	39 WEEKS 5 DAYS	7/10	8/10	4 KG	G	36.2	G	36.5	G	36.6	G	36.5	G	36.6	G	36.4
17	AYUSHA	22	NCM	PRIMI	NIL	19/6/12	LSCS	F	40 WEEKS	7/10	8/10	3.1 KG	G	36.2	G	36.4	G	36.8	G	36.5	G	36.8	G	36.6
18	SHRUTHI	20	NCM	PRIMI	NIL	20/6/12	NVD	F	36 WEEKS 2 DAYS	8/10	9/10	2.6 KG	G	36.2	G	36.4	G	36.6	G	36.6	G	36.7	G	36.2
19	ANASUYA	19	NCM	PRIMI	NIL	21/6/12	NVD	F	39 WEEKS 1 DAY	6/10	8/10	2.6 KG	G	36.4	G	36.8	G	36.6	G	36.6	NR	NR	NR	NR
20	CHANDRAKALA	20	II CM	PRIMI	NIL	21/6/12	NVD	M	39 WEEKS	7/10	8/10	3.6 KG	G	36.3	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR
21	NEELAMMA	30	NCM	PRIMI	ANAEMIA	21/6/12	NVD	F	36 WEEKS	6/10	7/10	2.41 KG	G	36.3	G	36.6	G	36.8	B	35.4	G	36.5	G	36.4
22	MAMATHA	27	II CM	G2P1L1	NIL	21/6/12	LSCS	F	38 WEEKS	7/10	8/10	3.6 KG	G	36.3	G	36.5	G	36.7	G	36.6	G	36.4	G	36.6

MASTER CHART

No	Name	Age		Obs	Complication	Date	Mode	Sex	Gestation	A1	A2	Weight	D1	T1	D2	T2	D3	T3	D4	T4	D5	T5	D6	T6
23	REKHA	20	NCM	G2P1L1	NIL	21/6/12	NVD	M	40 WEEKS 2 DAYS	7/10	8/10	3.3 KG	G	36.6	G	36.6	G	36.8	G	36.8	NR	NR	NR	NR
24	RAMAMANI	28	NCM	G2P1L1	NIL	22/6/12	LSCS	M	40 WEEKS	7/10	8/10	3.6 KG	G	36.4	G	36.6	G	36.6	G	36.4	G	36.6	G	36.6
25	ROOPA	22	NCM	PRIMI	NIL	22/6/12	LSCS	F	40 WEEKS 4 DAYS	7/10	8/10	2.5 KG	G	36.2	B	35.2	G	36.6	G	36.3	G	36.7	G	36.6
26	PREMA	22	NCM	PRIMI	NIL	22/6/12	NVD	M	40 WEEKS 2 DAYS	7/10	8/10	2.9 KG	G	36.5	G	36	G	36.5	NR	NR	NR	NR	NR	NR
27	THULASI	22	NCM	G2P1L1	NIL	23/6/12	NVD	M	36 WEEKS	6/10	8/10	2.4 KG	G	36.4	G	36.3	G	36.7	G	36.6	G	36.6	G	36.5
28	GAYATHRI	25	NCM	G2P1L1	NIL	24/6/12	NVD	M	35 WEEKS 4 DAYS	8/10	9/10	1.8 KG	B	35.2	B	35.4	G	36.3	B	35.3	G	36.5	B	35.4
29	VANITHA	19	NCM	PRIMI	IMMINENT ECLAMPSIA	24/6/12	NVD	M	39 WEEKS 4 DAYS	8/10	9/10	2.9 KG	G	36.2	G	36.3	G	36	G	36.8	NR	NR	NR	NR
30	YASHODA	28	NCM	G4P3L3	NIL	25/6/12	NVD	F	36 WEEKS 1 DAY	7/10	9/10	1.8 KG	G	36.5	B	35.4	G	36.6	G	36.7	G	36.5	G	36.6
31	MEENA	26	NCM	G2P1L1	K/C/O HYPOTHYROIDISM	25/6/12	LSCS	F	39 WEEKS 2 DAYS	7/10	8/10	2.9 KG	G	36.8	G	36.4	G	36.4	G	36.4	G	36.6	G	36.7
32	SUMANA	26	NCM	PRIMI	SEVERE PRE ECLAMPSIA	1/7/12	NVD	M	42 WEEKS	7/10	8/10	3.4 KG	G	36.2	G	36.3	NR	NR	NR	NR	NR	NR	NR	NR
33	VEENA	20	II CM	PRIMI	NIL	1/7/12	NVD	F	42 WEEKS	7/10	8/10	1.7 KG	B	35.1	B	35.2	G	36.1	G	36.7	G	36.6	G	36.6
34	GEETHA	20	NCM	PRIMI	NIL	1/7/12	LSCS	F	42 WEEKS	8/10	9/10	3.5 KG	G	36.4	G	36	G	36.3	G	36.6	G	36.2	G	36.7
35	SHYLAJA	23	NCM	G2A1	NIL	1/7/12	NVD	F	38 WEEKS	7/10	9/10	2.5 KG	G	36.6	G	36.3	G	36.8	G	36.7	G	36.1	G	36.6
36	LATHA	20	NCM	PRIMI	NIL	2/7/12	NVD	M	38 WEEKS 3 DAYS	7/10	8/10	2.3 KG	G	36.6	B	35.4	G	36.5	G	36.7	NR	NR	NR	NR
37	KAVITHA	20	NCM	PRIMI	HBSAG +VE	2/7/12	LSCS	M	40 WEEKS 2 DAYS	7/10	9/10	2.7 KG	G	36.8	G	36.1	G	36.6	G	36.6	G	36.4	G	36.6
38	KANAKAMMA	26	II CM	G3P2L2	ANAEMIA	2/7/12	LSCS	F	39 WEEKS 4 DAYS	7/10	9/10	2.8 KG	G	36.6	G	36.2	G	36.8	G	36.6	G	36.2	G	36.7
39	SOWMYA	22	NCM	G2A1	NIL	2/7/12	NVD	F	37 WEEKS 5 DAYS	7/10	9/10	2.4 KG	G	36.5	G	36	G	36.7	NR	NR	NR	NR	NR	NR
40	CHANDRAMMA	22	NCM	PRIMI	NIL	2/7/12	LSCS	F	40 WEEKS 1 DAY	7/10	9/10	3.25 KG	G	36.4	G	36.4	G	36.3	G	36.7	G	36.3	G	36.6
41	LAKSHMAMMA	22	NCM	PRIMI	NIL	2/7/12	LSCS	F	38 WEEKS 2 DAYS	8/10	9/10	2.7 KG	G	36.3	G	36.6	G	36.5	G	36.8	G	36.4	G	36.7
42	NETHRAVATHI	25	NCM	G3P2L1D1	GDM WITH PREECLAMPSIA	2/7/12	LSCS	M	39 WEEKS	7/10	9/10	2.8 KG	G	36.7	G	36	G	36	G	36.3	G	36.2	G	36.5
43	NASEEMA TAJ	21	II CM	PRIMI	NIL	2/7/12	LSCS	M	40 WEEKS 1 DAY	7/10	8/10	3.8 KG	G	36.6	G	35.9	G	36.7	G	36.8	G	36	G	36.6
44	PAVITHRA	20	NCM	PRIMI	NIL	3/7/12	LSCS	M	37 WEEKS 3 DAYS	7/10	9/10	3 KG	G	36.4	B	35.3	G	36.6	G	36.6	G	36.3	G	36.5
45	SHILPA	23	II CM	G2P1L1	NIL	3/7/12	NVD	F	41 WEEKS	6/10	8/10	3.2 KG	G	36.5	G	36.6	G	36.5	NR	NR	NR	NR	NR	NR
46	THULASI	25	NCM	G3P2L2	NIL	3/7/12	NVD	M	36 WEEKS 3 DAYS	6/10	8/10	2.28 KG	G *	35.4	B	35.3	G	36.4	G	36.7	G	36.7	G	36.7
47	SAMEENA TAJ	22	NCM	G2P1L1	NIL	3/7/12	NVD	M	40 WEEKS 1 DAY	7/10	9/10	2.7 KG	G	36.2	G	36	G	36.7	G	36.4	G	36.6	G	36.6

MASTER CHART

No	Name	Age				Date		Sex	Gestation	A1	A2	Weight												
48	AYESHA	24	NCM	PRIMI	NIL	3/7/12	NVD	M	38 WEEKS 1 DAY	7/10	8/10	3 KG	G	36.5	G	36.3	NR	NR	NR	NR	NR	NR	NR	NR
49	MAMATHA	18	NCM	PRIMI	NIL	4/7/12	NVD	F	38 WEEKS	7/10	8/10	2.8 KG	G	36.6	G	36.6	G	36.6	G	36.6	G	36.7	G	36.7
50	SHILPA	23	NCM	PRIMI	NIL	4/7/12	NVD	M	38 WEEKS	7/10	9/10	2.6 KG	G	36.6	G	35.8	G	36	G	26.4	G	36.6	G	36.7
51	MANJULA	22	II CM	G3P2L2	NIL	5/7/12	NVD	M	39 WEEKS 1 DAY	7/10	8/10	3.3 KG	G	36.4	G	36	G	36.7	G	36.6	NR	NR	NR	NR
52	TASINA TAJ	19	NCM	PRIMI	NIL	5/7/12	LSCS	F	38 WEEKS	7/10	9/10	2.53 KG	G	36.6	G	35.9	G	36.3	G	36.8	G	36.5	G	36.6
53	LAKSHMIDEVI	29	NCM	G4P2L2A1	GDM	5/7/12	LSCS	F	39 WEEKS	7/10	8/10	3.35 KG	G	36.4	G	36.4	G	36.5	G	36.7	G	36.7	G	36.7
54	SHILPA	25	NCM	G2P1D1	NIL	5/7/12	NVD	F	38 WEEKS 5 DAYS	7/10	9/10	2.8 KG	G	36.2	G	36.3	G	35.9	G	36.2	G	36.6	G	36.7
55	RADHA	25	II CM	PRIMI	NIL	6/7/12	NVD	F	39 WEEKS	6/10	9/10	2.8 KG	G	36.9	G	36.2	NR	NR	NR	NR	NR	NR	NR	NR
56	SASHIKALA	27	NCM	G2P1L1	NIL	7/7/12	NVD	M	40 WEEKS 5 DAYS	6/10	9/10	3.5 KG	G	36.6	G	36.6	G	36.6	G	36.6	NR	NR	NR	NR
57	SARASWATHI	22	NCM	PRIMI	NIL	7/7/12	NVD	M	36 WEEKS 5 DAYS	5/10	7/10	1.9 KG	**B**	**35.2**	**B**	**35.3**	G	36.1	**B**	**35.4**	G	36.6	G	36.6
58	AMARAVATHI 1ST	26	NCM	G2P1L1	NIL	7/7/12	NVD	M	36 WEEKS 4 DAYS	8/10	9/10	2.1 KG	G	36.4	**B**	**35.3**	G	36.5	G	36.7	G	36.5	G	36.7
59	AMARAVATHI 2ND	26	NCM	G2P1L1	NIL	7/7/12	NVD	M	36 WEEKS	6/10	8/10	1.9 KG	**B**	**35.2**	G	35.7	G	36.3	G	36.6	G	36.6	G	36.7
60	VEENA	25	II CM	PRIMI	NIL	8/7/12	NVD	M	39 WEEKS 1 DAY	6/10	7/10	2.9 KG	G	36.3	G	36	G	36.7	NR	NR	NR	NR	NR	NR
61	RANI	22	NCM	PRIMI	NIL	8/7/12	NVD	M	38 WEEKS 2 DAYS	8/10	9/10	2.8 KG	G	36.7	G	36.6	G	36.5	G	36.6	NR	NR	NR	NR
62	CHINNAMA	25	NCM	PRIMI	HBSAG +VE	8/7/12	NVD	F	37 WEEKS 4 DAYS	7/10	9/10	2.2 KG	G	36	**B**	**35.4**	G	36.6	**B**	**35.3**	G	36.5	G	36.6
63	UMA	23	II CM	G2P1L1	NIL	9/7/12	NVD	F	40 WEEKS 2 DAYS	7/10	8/10	3.25 KG	G	36.6	G	36.4	G	36.5	G	36.6	NR	NR	NR	NR
64	SARITHA	21	NCM	PRIMI	NIL	9/7/12	LSCS	M	38 WEEKS 5 DAYS	7/10	8/10	2.9 KG	G	36.6	G	36.3	G	36.4	G	36.4	G	36.5	G	36.6
65	GHORIYA	28	NCM	G2P1L1	NIL	9/7/12	LSCS	F	41 WEEKS 1 DAY	7/10	8/10	3.8 KG	G	36.5	G	36	G	36.6	G	36.7	G	36.6	G	36.6
66	SHYAMALA	22	NCM	G2P1L1	NIL	10/7/12	LSCS	M	40 WEEKS 1 DAY	7/10	9/10	3.3 KG	G	36.7	G	36.5	G	36.5	G	36.6	G	36.6	G	36.7
67	RI36.3WANA	20	NCM	PRIMI	NIL	10/7/12	NVD	F	39 WEEKS 1 DAY	8/10	9/10	2.97 KG	G	36.6	G	36.2	G	36.3	NR	NR	NR	NR	NR	NR
68	GOWRAMMA	30	II CM	G2P1L1	NIL	10/7/12	LSCS	M	40 WEEKS	7/10	9/10	3 KG	G	36.5	G	36.4	G	36.7	G	36.8	G	36.5	G	36.6
69	CHANDRKALA	25	II CM	PRIMI	NIL	12/7/12	NVD	F	41 WEEKS 1 DAY	7/10	8/10	3.45 KG	G	36.5	NR	NR	NR	NR	NR	NR	NR	NR	NR
70	ASHIYA	20	NCM	PRIMI	NIL	12/7/12	NVD	F	35 WEEKS 6 DAYS	6/10	8/10	1.8 KG	G	36.1	**B**	**35.3**	G	36.6	**B**	**35.3**	G	36.6	G	36.7
71	YALLAMA	18	NCM	PRIMI	NIL	12/7/12	NVD	F	37 WEEKS 3 DAYS	7/10	8/10	2.65 KG	G	36	G	36.3	G	36.8	G	36.7	NR	NR	NR	NR
72	SUVARNAMA	21	NCM	PRIMI	NIL	12/7/12	NVD	F	37 WEEKS	8/10	9/10	2.76 KG	G	36.3	G	36.4	G	36.5	NR	NR	NR	NR	NR	NR
73	NAGAVENI	21	II CM	PRIMI	NIL	13/7/12	NVD	M	40 WEEKS 1 DAY	7/10	8/10	2.8 KG	G	36.5	G	36	G	36.6	G	36.4	NR	NR	NR	NR
74	VANITHA	31	NCM	PRIMI	NIL	13/7/12	LSCS	M	40 WEEKS 1 DAY	7/10	9/10	2.45 KG	G	36.2	G	36.2	G	36	**B**	**35.4**	G	36.8	G	36.7

MASTER CHART

No	Name	Age	Group	Obs	Complication	Date	Mode	Sex	Weeks	A1	A2	Weight												
75	CHAITHRA	20	NCM	G2P1L1	NIL	13/7/12	LSCS	F	37 WEEKS	7/10	8/10	2.6 KG	G	36.6	G	36.6	G	36.5	G	36.6	G	36.6	G	36.8
76	THASEEN TAJ	21	NCM	G3P1L1D1	HYPOTHYROIDISM	14/7/12	LSCS	M	39 WEEKS	7/10	8/10	3 KG	G	36.5	G	36.3	G	36.7	G	36.6	G	36.5	G	36.6
77	MUNIRATHNA	26	NCM	G3P2L2	NIL	15/7/12	LSCS	F	37WEEKS 3DAYS	5/10	7/10	2.36 KG	G	36.2		36.3	G	36.3	G	36.7	G	36.7	G	36.4
78	SUSHMA	20	NCM	PRIMI	HBSAG +VE	15/7/12	NVD	M	40 WEEKS 3 DAYS	7/10	9/10	3.3 KG	**B**	**35.4**	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR
79	SUVARNA	23	NCM	PRIMI	MILDPREECLAMPSIAWITHCPD	15/7/12	LSCS	M	39 WEEKS 2 DAYS	7/10	9/10	3.16 KG	G	36.4	G	36	G	36.5	G	36.6	G	36.8	G	36.8
80	SARASWATHI	22	NCM	PRIMI	NIL	16/7/12	LSCS	M	39 WEEKS 3 DAYS	7/10	9/10	2.7 KG	G	36.5	G	36.2	G	36.4	G	36.6	G	36.6	G	36.8
81	PARVATHI	23	NCM	PRIMI	NIL	16/7/12	LSCS	M	38WEEKS	8/10	9/10	2.7 KG	G	36.6	G	36.6	G	36.6	G	36.8	G	36.6	G	36.6
82	SHARADHA	25	NCM	G2P1L1	MILD ANAEMIA	16/7/12	NVD	F	38 WEEKS 1DAY	8/10	9/10	2.62 KG	G	36.4		36.4	G	36.8	G	36.6	G	36.5	G	36.7
83	REDDAMMA	26	NCM	G3P2L2	NIL	16/7/12	NVD	F	40 WEEKS	7/10	9/10	3.19 KG	G	36.6	G	36.3	G	36.7	NR	NR	NR	NR	NR	NR
84	SHABANA TAJ	18	NCM	PRIMI	NIL	17/7/12	NVD	F	40 WEEKS	7/10	9/10	1.88 KG	**B**	**35**	**B**	**35.3**	G	36.1	**B**	**35.4**	**B**	**35.3**	G	36.6
85	ROOPA	20	NCM	PRIMI	NIL	17/7/12	NVD	M	40 WEEKS	8/10	9/10	2.9 KG	G	36	G	36.6	G	35.9	G	36.7	NR	NR	NR	NR
86	KARTHIKA	20	NCM	PRIMI	NIL	18/7/12	LSCS	F	38 WEEKS	8/10	9/10	2.3 KG	G	35.9	**B**	**35.3**	G	36.5	G	36.6	G	36.6	G	36.5
87	VANDHANA	23	NCM	PRIMI	NIL	18/7/12	LSCS	F	36 WEEKS 4 DAYS	7/10	8/10	2.3 KG	G	36.2	G	36.1	G	36	G	36.4	G	36.8	G	36.4
88	SHAMALA	23	NCM	G2P1L1	NIL	18/7/12	LSCS	F	38 WEEKS 2 DAYS	7/10	8/10	2.8 KG	G	36.5	G	36.6	G	36.6	G	36.5	G	36.7	G	36.6
89	SHARADA	30	II CM	PRIMI	PRECLAMPSIA WITHRETRO+VE	18/7/12	NVD	M	37 WEEKS 5 DAYS	7/10	9/10	2.3 KG	G	36.5	G	36.5	G	36.2	G	36.6	G	36.5	G	36.8
90	NANDHINI	26	NCM	G2P1L1	PRE ECLAMPSIA	18/7/12	NVD	F	40 WEEKS	7/10	8/10	3.1KG	G	36.4	G	36.1	G	36.6	NR	NR	NR	NR	NR	NR
91	YASHODHAMMA	25	NCM	G2P1L1	NIL	18/7/12	LSCS	F	37 WEEEKS 5DAYS	7/10	8/10	2.3 KG	**B**	**35.4**	G	36.4	G	36.7	G	36.7	G	36.8	G	36.6
92	JYOTHI	20	NCM	G2P1L1	NIL	18/7/12	NVD	M	39 WEEKS 2 DAYS	8/10	9/10	3.2 KG	G	36.5	G	36.5	G	36.3	NR	NR	NR	NR	NR	NR
93	MANJULA	35	NCM	G4P2L1	ABRUPTIO WITH PRETERM LABOUR	18/7/12	NVD	M	37WEEKS 3DAYS	7/10	9/10	2.65 KG	G	36.5	G	35.9	**B**	**35.4**	G	36	NR	NR	NR	NR
94	NOORI	20	II CM	PRIMI	NIL	19/7/12	LSCS	M	37 WEEKS 2 DAYS	7/10	8/10	2.3KG	G	36	**B**	**35.4**	G	36.5	G	36.5	G	36.8	G	36.2
95	SHIVAMMA	22	NCM	PRIMI	PRE ECLAMPSIA	19/7/12	LSCS	F	37 WEEKS 2DAYS	7/10	8/10	2.4 KG	G	36.2	G	36.5	G	36.4	G	36.7	G	36.6	G	36.7
96	PUSHPA	18	NCM	PRIMI	NIL	19/7/12 NVD		M	38 WEEKS	7/10	10/6	2.4 KG	G	36	G	36.1	G	36.6	G	36.6	G	36.8	G	36.6
97	ASNA BEGUM	25	NCM	G3P2L2	NIL	19/7/12	NVD	M	39 WEEKS	8/10	9/10	2.6 KG	G	36.2	G	36.3	G	36.6	G	36.8	G	36.7	G	36.4
98	BHARATHI	21	NCM	PRIMI	NIL	19/7/12	NVD	M	38 WEEKS	7/10	8/10	3 KG	G	36.4	**B**	**35.4**	G	36.7	**B ***	**35.9 ***	NR	NR	NR	NR
99	ARUNA	19	II CM	PRIMI	NIL	20/7/12	NVD	M	40 WEEKS	8/10	9/10	2.8KG	G	36.4	G	36.6	G	36.4	G	36.4	G	36.6	G	36.6
100	BELLAMMA	20	NCM	PRIMI	NIL	20/7/12	NVD	F	39 WEEKS	7/10	8/10	3.4 KG	G	36.2	G	36.5	G	36.6	NR	NR	NR	NR	NR	NR

MASTER CHART

No	Name	Age		Code	Complication	Date	Mode	Sex	Gestation			Weight												
101	VARALAKSHMI	28	NCM	G3P2L1D1	NIL	20/7/12	LSCS	F	38 WEEKS 4 DAYS	8/10	9/10	2.5KG	G	36.4	**B**	**35.3**	G	36.5	G	36.6	G	36.6	G	36.5
102	ANITHA	20	NCM	PRIMI	NIL	21/7/12	NVD	M	35 WEEKS 3 DAYS	6/10	8/10	1.8KG	**B**	**35.2**	**B**	**35.3**	G	36.6	**B**	**35.4**	G	36.8	G	36.2
103	ANJINAMMA	22	NCM	G4A3	PLACENTA PREVIA	21/7/12	LSCS	F	34WEEKS 5 DAYS	8/10	9/10	1.75 KG	**B**	**35.3**	**B**	**35.3**	G	36	G	36.1	G	36.5	**B**	**35.4**
104	NETHRA	21	NCM	G2P1D1	NIL	21/7/12	LSCS	F	40 WEEKS 2 DAYS	7/10	9/10	3.4 KG	G	36.3	G	36.5	G	36.4	G	36.7	G	36.6	G	36.7
105	ARUNA	22	NCM	G2P1L1	NIL	21/7/12	LSCS	F	40WEEKS 2DAYS	7/10	8/10	2.9 KG	G	36.4	G	36.1	G	36.7	G	36.2	G	36.8	G	36.6
106	SAROJAMMA	28	NCM	G2P1L1	NIL	22/7/12	NVD	M	37WEEKS 1 DAY	6/10	8/10	2.4 KG	G	36.3	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR
107	VANAJA	22	II CM	PRIMI	NIL	22/7/12	NVD	M	38 WEEKS 12DAYS	4/10	7/10	2.5 KG	G	36.3	G	36.4	G	36.5	NR	NR	NR	NR	NR	NR
108	SAVITHRAMMA	28	II CM	PRIMI	SEVERE PRE ECLAMPSIA	23/7/12	LSCS	M	40 WEEKS 2 DAYS	7/10	8/10	3.4 KG	G	36.4	G	36.5	G	36.8	G	36.6	G	36.6	G	36.5
109	KIRAN KUMARI	20	NCM	G3A2	SEVERE PRE ECLAMPSIA	23/7/12	LSCS	F	36 WEEKS 5 DAYS	7/10	8/10	2 KG	G	36.2	**B**	**35.3**	G	36.5	**B**	**35.4**	G	36.5	G	36.6
110	KIRAN KUMARI	20	NCM	G3A2	SEVERE PRE ECLAMPSIA	23/7/12	LSCS	F	37 WEEKS 5 DAYS	7/10	8/10	2.15 KG	G	36.2	G	35.9	G	36.6	G	36.7	G	36.4	G	36
111	BHARATHI	19	II CM	PRIMI	NIL	23/7/12	NVD	M	40 WEEKS 1 DAY	7/10	9/10	3.02 KG	G	36.2	G	36.1	G	36	NR	NR	NR	NR	NR	NR
112	MANJULA	21	NCM	G2P1	NIL	23/7/12	NVD	F	38 WEEKS	8/10	9/10	2.8 KG	G	36.4	G	36.2	G	36.4	G	36.5	G	36.6	G	36.5
113	RENUKA	20	NCM	PRIMI	NIL	23/7/12	LSCS	M	39 WEEKS	7/10	9/10	2.65 KG	G	36.4	G	36.3	G	36.7	G	36.6	G	36.7	G	36.6
114	VEENA	25	II CM	G2A1	NIL	24/7/12	NVD	F	41 WEEKS 2 DAYS	5/10	7/10	3.2 KG	G	36.3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
115	AMBIKA	21	NCM	PRIMI	NIL	24/7/12	NVD	M	40 WEEKS 3 DAYS	7/10	9/10	3.1KG	G	36.3	G	36	G	36	NR	NR	NR	NR	NR	NR
116	JAYANTHI	20	NCM	PRIMI	NIL	24/7/12	LSCS	M	36 WEEKS 4 DAYS	5/10	7/10	2.15 KG	G	36.4	**B**	**35.2**	G	36.5	**B**	**35.4**	G	36.6	G	36.3
117	ROJA	19	NCM	PRIMI	NIL	24/7/12	LSCS	M	39 WEEKS	7/10	9/10	2.5 KG	G	36.2	G	36.5	G	36.3	G	36.7	G	36.8	G	36.8
118	SULTANA	23	NCM	PRIMI	NIL	24/7/12	LSCS	F	38 WEEKS	7/10	9/10	2.8 KG	G	36.3	G	36.1	G	36.6	G	36.8	G	36.5	G	36.5
119	BHARATHI	32	NCM	G2P1L1	PRE ECLAMPSIA	25/7/12	NVD	F	39 WEEKS	8/10	9/10	3.23 KG	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
120	FAHMEEDA	30	NCM	G3P2L1	NIL	26/7/12	LSCS	M	39 WEEKS 2 DAYS	7/10	9/10	2.61 KG	G	36.2	G	36.4	G	36.7	G	36.6	G	36.6	G	36.7
121	BHARATHI	20	NCM	PRIMI	NIL	26/7/12	LSCS	M	37 WEEKS 2 DAYS	7/10	8/10	2 KG	G	36.3	**B**	**35.3**	**B**	**35.4**	G	36	G	36.5	G	36.6
122	SAHANA PARVEEN	30	NCM	G3P1D1A1	GDM CHRONIC HT RH NEG	26/7/12	LSCS	M	38 WEEKS 5 DAYS	7/10	9/10	1.86 KG	**B**	**35.3**	**B**	**35.2**	G	36.8	G	36.7	G	36.8	G	36.3
123	LAKSHMI DEVAMA	29	NCM	G2P1L1	NIL	26/7/12	LSCS	F	39 WEEKS	7/10	9/10	2.75 KG	G	36.3	G	36.1	G	36.5	G	36.5	G	36.7	G	36.5
124	PARIMALA	29	NCM	PRIMI	NIL	26/7/12	LSCS	F	39 WEEKS 2 DAYS	7/10	9/10	2.8 KG	G	36.7	G	36.3	G	36.7	G	36.5	G	36.2	G	36
125	FOU36.3IYA	28	NCM	G3P2L1D1	NIL	27/7/12	NVD	M	38 WEEKS 2 DAYS	4/10	6/10	2.3 KG	G	36.4	G	36.5	G	36.6	G	36.7	NR	NR	NR	NR

MASTER CHART

No	Name	Age		Parity	Complication	Date	Mode	Sex	Gestation			Wt												
126	MANJULA	27	NCM	PRIMI	NIL	27/7/12	LSCS	M	36 WEEKS 4 DAYS	7/10	8/10	2 KG	G	36.5	B	36.2	G	36.4	G	36.8	G	36.6	G	36.6
127	IRFANA	22	II CM	G4P3L2D1	ECLAMPSIA	28/7/12	NVD	M	37 WEEKS	5/10	7/10	1.9 KG	B	35.2	G	36	G	36.3	B	35.2	G	36.5	G	36.5
128	SAMEENA TAJ	25	NCM	G2P1L1	NIL	28/7/12	LSCS	F	40 WEEKS	7/10	9/10	2.58 KG	G	36.6	G	36.4	G	36.7	G	36.6	G	36.7	G	36.3
129	ANURADHA	20	NCM	PRIMI	NIL	29/7/12	LSCS	F	37 WEEKS 2 DAYS	7/10	9/10	2.8 KG	G	36.6	G	36.5	G	36.7	G	36.4	G	36.3	G	36.5
130	ROOPA	20	NCM	PRIMI	NIL	29/7/12	LSCS	F	39 WEEKS	7/10	9/10	3 KG	G	36.3	G	35.7	G	36.6	G	36.5	G	36.8	G	36.6
131	ROOPA	22	NCM	PRIMI	NIL	30/7/12	NVD	F	41 WEEKS 2 DAYS	8/10	9/10	3.4 KG	G	36.5	G	36.1	NR	NR	NR	NR	NR	NR	NR	NR
132	NETHRAVATHI	21	NCM	PRIMI	NIL	30/7/12	LSCS	F	39 WEEKS	8/10	9/10	3.1 KG	G	36.4	G	36.4	G	36.7	G	36.7	G	36.1	G	36.7
133	SUDHA	20	NCM	PRIMI	NIL	1/8/12	LSCS	M	36 WEEKS	7/10	9/10	2 KG	G	36.4	B	35.4	G	36	G	36.6	G	36.6	G	36.6
134	BHAGYALAKSHMI	22	II CM	G4P3L3D1	NIL	1/8/12	LSCS	F	39 WEEKS 4 DAYS	8/10	9/10	2.6 KG	G	36.7	G	36.3	G	36.5	G	36.6	G	36.5	G	36.3
135	ANITHA	23	NCM	PRIMI	NIL	1/8 12	NVD	M	40 WEEKS 2 DAYS	7/10	9/10	3.6 KG	G	36.5	G	36.6	G	36.4	NR	NR	NR	NR	NR	NR
136	PARVATHI	24	NCM	PRIMI	NIL	2/8/12	LSCS	M	39 WEEKS 1 DAY	6/10	8/10	2.8 KG	G	36.8	G	36.5	G	36.7	G	36.5	G	36.6	G	36.5
137	SHOBA	21	NCM	PRIMI	NIL	3/8/12	LSCS	M	36 WEEKS 5 DAYS	5/10	7/10	2.1 KG	B	35.2	G	36.2	G	36.6	G	36.4	G	36.2	G	36.6
138	MUBARAK BANU	28	NCM	G3P2L2	NIL	3/8/12	NVD	M	38 WEEKS 3 DAYS	7/10	9/10	2.5 KG	G	36.4	G	36.1	G	36.8	NR	NR	NR	NR	NR	NR
139	ROJA	22	NCM	PRIMI	SEVERE PRE ECLAMPSIA	3/8/12	NVD	M	39 WEEKS	7/10	9/10	2.7 KG	G	36.5	G	36	G	36.7	G	36.6	NR	NR	NR	NR
140	HEMA	21	NCM	PRIMI	NIL	3/8/12	NVD	F	38 WEEKS 3 DAYS	7/10	9/10	2.2 KG	G	36.5	G	36.4	G	36.1	G	36.7	G	36.6	G	36.7
141	LAKSHMIDEVI	24	II CM	G2P1L1	NIL	3/8/12	LSCS	F	38 WEEKS 5 DAYS	7/10	8/10	2.75 KG	G	36.7	G	36.5	G	35.9	G	36.2	G	36.4	G	35.9
142	LAKSMI	20	NCM	PRIMI	GESTATIONAL HT RH NEG	3/8/12	NVD	F	40 WEEKS 1 DAY	8/10	9/10	2.94 KG	G	36.6	G	36.6	G	36.5	NR	NR	NR	NR	NR	NR
143	VIDYA	21	NCM	PRIMI	NIL	3/8/12	NVD	M	38 WEEKS	7/10	8/10	2.3 KG	G	36.6	G	35.9	G	36.6	G	36.4	G	36.8	G	36.6
144	GANGARATHHNA	22	NCM	G2P1L1	NIL	4/8/12	LSCS	M	36 WEEKS 1 DAY	5/10	7/10	2.1 KG	G	36.4	B	35.3	G	36	G	36.6	G	36.5	G	36.8
145	NIRMALA	22	NCM	PRIMI	HBSAG +VE	4/8 12	NVD	M	40 WEEKS 2 DAYS	7/10	9/10	3.4 KG	G	36.5	G	36.4	G	36.7	NR	NR	NR	NR	NR	NR
146	SUGUNA	22	NCM	PRIMI	NIL	5/8/12	LSCS	F	39 WEEKS	8/10	9/10	2.7 KG	G	36.4	G	36.3	G	36.6	G	36.7	G	36.6	G	36.5
147	MANJULA	22	II CM	G2P1L1	NIL	5/812	LSCS	F	41 WEEKS	8/10	9/10	3.4 KG	G	36.7	G	36.1	G	36.4	G	36.2	G	36.7	G	36.3
148	BHARATHI	22	NCM	G2P1L1	NIL	5/8/12	NVD	F	40 WEEKS 1 DAY	7/10	9/10	3 KG	G	36.5	G	36.5	G	36.2	G	36.7	NR	NR	NR	NR
149	NIRMALA	30	II CM	G3P1L1A1	NIL	6/8/12	NVD	M	39 WEEKS	7/10	9/10	3 KG	G	36.4	G	36.2	G	36.8	NR	NR	NR	NR	NR	NR
150	AYESHA	19	NCM	PRIMI	GESTATIONAL HT	6/8/12	NVD	F	39 WEEKS	8/10	9/10	2.6 KG	G	36.4	G	36	G	36.3	G	36.6	NR	NR	NR	NR
151	YASHODA	21	II CM	G2P1L1	NIL	6/8/12	LSCS	M	40 WEEKS 1 DAY	7/10	9/10	3 KG	G	36.3	G	36.6	G	36.6	G	36.6	G	36.8	G	36.6
152	BHAGYAMMA	24	NCM	G3P1L1A1	PRE ECLAMPSIA	6/8/12	NVD	F	37 WEEKS	7/10	8/10	1.9 KG	B	35.2	B	35.3	G	35.8	B	35.3	G	36.6	B	35.3

MASTER CHART

No	Name	Age		Obstetric	Complication	Date	Delivery	Sex	Gestation			Weight													
153	RADHA	22	NCM	G2A1	NIL	6/8/12	NVD	M	37 WEEKS	7/10	8/10	2.2 KG	**B**	**35.3**	G	36.5	G	36.7	G	36.8	G	36.5	G	36.7
154	PADMAVATHY	23	NCM	PRIMI	NIL	7/8/12	NVD	M	41 WEEKS 2 DAYS	8/10	9/10	3.3 KG	G	36.3	**B**	**35.4**	NR	NR	NR	NR	NR	NR	NR	NR
155	RUKHMANI	26	NCM	G3P1L1D1	NIL	7/8/12	LSCS	F	35 WEEKS 3 DAYS	6/10	8/10	1.85 KG	**B**	**35.2**	G	36.1	G	36	**B**	**35.2**	G	36.4	G	36.6
156	VARSHA	18	NCM	PRIMI	NIL	7/8/12	NVD	M	38 WEEKS 2 DAYS	7/10	8/10	2.3 KG	G	36.5	G	36.3	G	36.5	G	36.6	NR	NR	NR	NR
157	ANUSHA	23	NCM	G2P1L1	NIL	8/8/12	LSCS	F	40 WEEKS 1 DAY	7/10	9/10	2.8 KG	G	36.7	G	36.4	G	36.6	G	36.7	G	36.8	G	36.6
158	SAMEENA	24	NCM	PRIMI	NIL	8/8/12	NVD	F	39 WEEKS 1 DAY	6/10	8/10	2.52 KG	G	36.4	G	36.6	G	36.6	G	36.8	NR	NR	NR	NR
159	ARUNA	26	II CM	G2P1L1	NIL	9/8/12	NVD	M	41 WEEKS	7/10	8/10	2.99 KG	G	36.5	G	36.1	G	36.6	NR	NR	NR	NR	NR	NR
160	AMARAVATHI	23	II CM	G2A1	NIL	9/8/12	LSCS	M	37 WEEKS 5 DAYS	7/10	8/10	2.56 KG	G	36.6	G	36.5	G	36.7	G	36.6	G	36.3	G	36.5
161	MANJAMMA	30	NCM	G2A1	NIL		9/8/12	LSCS	M	40 WEEKS 5 DAYS	7/10	8/10	2.8 KG	G	36.4		36.2	G	36.5	G	36.7	G	36.6	G	36.8
162	SHILPA	20	NCM	PRIMI	NIL	10/8/12	LSCS	F	38 WEEKS 3 DAYS	7/10	8/10	2.7 KG	G	36.5	G	36	G	36	G	36.4	G	36.4	G	36.1
163	MANI	26	NCM	PRIMI	NIL	10/8/12	LSCS	F	41 WEEKS	6/10	8/10	3.2 KG	G	36.7	G	36.4	G	36.8	G	36.6	G	36.5	G	36.5
164	NAGAVENI	20	NCM	PRIMI	NIL	11/8/12	NVD	M	41 WEEKS	8/10	9/10	3.1 KG	G	36.6	G	36.6	G	36.4	NR	NR	NR	NR	NR	NR
165	SHIREEN TAJ	19	NCM	PRIMI	NIL	11/8/12	NVD	F	39 WEEKS 1 DAY	7/10	8/10	2.7 KG	G	36.4	G	36.1	G	36.5	G	36.3	NR	NR	NR	NR
166	THABASUM	22	II CM	G6P2L2A3	ANTEPARTUM ECLAMPSIA	11/8/12	LSCS	F	38 WEEKS 2 DAYS	8/10	9/10	2.35 KG	G	36.5	G	36.2	G	36.6	G	36.6	G	36.6	G	36.6
167	GIRIJA	24	NCM	PRIMI	NIL	11/8/12	LSCS	M	41 WEEKS	7/10	8/10	3.15 KG	G	36.6	G	36.3	G	36	G	36.7	G	36.8	G	36.3
168	NARAYANAMMA	40	NCM	G3P2L1	RETRO POSITIVE	12/8/12	NVD	F	39 WEEKS 3 DAYS	4/10	6/10	2.8 KG	G	36.4	G	36.5	G	36.7	NR	NR	NR	NR	NR	NR
169	PRAMEELA	20	NCM	PRIMI	NIL	12/8/12	NVD	M	36 WEEKS 1 DAY	8/10	9/10	1.9 KG	G	36.1	**B**	**35.3**	G	36	**B**	**35.4**	G	36.7	G	36.5
170	GAYATHRI	25	II CM	G2A1	NIL	12/8/12	LSCS	M	39 WEEKS	7/10	8/10	2.5 KG	G	36.3	G	36.5	G	36.7	G	36.6	G	36.4	G	36.2
171	SHOBA	20	II CM	PRIMI	NIL	13/8/12	NVD	M	39 WEEKS	7/10	8/10	2.15 KG	G	36.3	**B**	**35.4**	G	36.3	G	36.5	G	36.2	G	36.6
172	BHAVANI	22	NCM	G3A2	NIL	13/8/12	LSCS	F	40 WEEKS	7/10	8/10	2.9 KG	G	36.5	**B**	**35.4**	G	36.6	**B ***	**36 ***	G	36.5	G	36.7
173	U36.3MA	20	NCM	PRIMI	NIL	14/8/12	NVD	F	40 WEEKS 1 DAY	8/10	9/10	2.6 KG	G	36.6	G	36.6	G	36.5	G	36.8	NR	NR	NR	NR
174	NIRMALA	31	NCM	G3P1L1A1	NIL	14/8/12	NVD	M	40 WEEKS 5 DAYS	7/10	8/10	3.41 KG	G	36.7	G	36.1	G	36	NR	NR	NR	NR	NR	NR
175	MUBEEN TAJ	20	NCM	PRIMI	SEVERE PRE ECLAMPSIA	14/8/12	NVD	M	38 WEEKS 4 DAYS	8/10	9/10	2.25 KG	G	36.3	G	36.3	G	36.8	G	36.7	G	36.6	G	36.5
176	VIJAYA LAKSHMI	24	NCM	PRIMI	GESTATIONAL HT	15/8/12	LSCS	M	38 WEEKS 3 DAYS	8/10	9/10	2.6 KG	G	36.4	G	36.5	G	36.7	G	36.6	G	36.8	G	36.6
177	PUSHPA	25	II CM	G2P1L1	NIL	15/8/12	LSCS	F	39 WEEKS	7/10	9/10	2.62 KG	G	36.6	G	36.4	G	36.1	G	36	G	36.5	G	36.3
178	ANITHA	24	NCM	G2A1	NIL	16/8/12	NVD	F	41 WEEKS 1 DAY	7/10	9/10	2.97 KG	G	36.6	G	36.2	NR	NR	NR	NR	NR	NR	NR	NR
179	SHAMEEN TAJ	20	II CM	PRIMI	NIL	16/8/12	LSCS	M	38 WEEKS 1 DAY	8/10	9/10	2.5 KG	G	36.4	G	36	G	36.3	G	36.6	G	36.6	G	36.7

MASTER CHART

No	Name	Age	CM	Parity	Disorder	Date	Delivery	Sex	Weeks	A1	A2	Weight												
180	PAVITHRA	20	NCM	PRIMI	NIL	17/8/12	NVD	F	37 WEEKS 5 DAYS	7/10	8/10	2.3 KG	B	35.3	G	36.1	B	35.3	G	36.7	G	36.4	G	36.6
181	RADHA	22	II CM	PRIMI	NIL	19/8/12	NVD	M	39 WEEKS	8/10	9/10	2.6 KG	B	35.4	G	35.9	G	36.6	G	36.5	G	36	G	36.8
182	AARTHI	27	NCM	G2P1L1	NIL	19/8/12	NVD	F	41 WEEKS 3 DAYS	7/10	8/10	3.7 KG	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
183	NA36.3EEMA	28	NCM	G4P2L1D1	NIL	20/8/12	LSCS	F	39 WEEKS 2 DAYS	7/10	8/10	2.4 KG	G	36.4	G	36.2	G	36.7	G	36.4	G	36.7	G	36.5
184	KANAKAMMA	19	NCM	PRIMI	NIL	21/8/12	LSCS	M	39 WEEKS 2 DAYS	8/10	9/10	2.1 KG	B	35.2	G	36.5	G	36.6	G	36.6	G	36.2	G	36.6
185	VANI	25	NCM	PRIMI	NIL	21/8/12	NVD	M	40 WEEKS 3 DAYS	7/10	8/10	2.9 KG	G	36.6	G	36.4	G	36	G	36.5	G	36.7	G	36.3
186	LAVANYA	24	NCM	PRIMI	SEI36.3URE DISORDER	22/8/12	NVD	M	39 WEEKS 2 DAYS	7/10	8/10	2.4 KG	G	36.4	G	36.3	G	36.5	NR	NR	NR	NR	NR	NR
187	VISHALAKSHI	20	NCM	PRIMI	NIL	22/8/12	NVD	F	37 WEEKS 1 DAY	7/10	8/10	2.25 KG	G	36.3	G	36.6	G	35.9	G	36.4	G	36.5	G	36.6
188	RAMYA	23	II CM	PRIMI	NIL	22/8/12	LSCS	F	41 WEEKS 3 DAYS	7/10	8/10	3.4 KG	G	36.6	G	36	G	36.7	G	36.8	G	36.6	G	36.7
189	SHARADA	20	NCM	PRIMI	NIL	23/8/12	NVD	M	36 WEEKS 3 DAYS	7/10	9/10	2.2 KG	B	35.2	G	35.7	G	36.6	G	36.6	G	36.8	G	36.6
190	MALA	27	II CM	G3P1L1A1	NIL	23/8/12	LSCS	M	40 WEEKS 2 DAYS	7/10	8/10	3.1 KG	G	36.5	G	36.1	G	36.3	G	36.7	G	36.4	G	36.5
191	VANITHA	25	NCM	PRIMI	NIL	23/8/12	LSCS	F	40 WEEKS 2 DAYS	7/10	8/10	2.8 KG	G	36.4	G	36	B	35.4	G	36	G	36.3	G	36.8
192	JEYALAKSHMI	24	NCM	PRIMI	NIL	23/8/12	NVD	F	36 WEEKS	7/10	8/10	1.95 KG	B	35.2	G	36.5	B	35.3	B	35.4	G	36.6	G	36.3
193	NETHRA	22	NCM	PRIMI	NIL	24/8/12	NVD	M	39 WEEKS 2 DAYS	7/10	9/10	2.8 KG	G	36.5	G	36.2	NR	NR	NR	NR	NR	NR	NR	NR
194	NAGEEN TAJ	25	NCM	G3P2L2	NIL	24/8/12	NVD	M	39 WEEKS 1 DAY	7/10	9/10	2.7 KG	G	35.9	G	36.4	G	36.5	G	36.6	G	36.5	G	36
195	VISHALAKSHI	21	NCM	PRIMI	NIL	24/8/12	LSCS	M	40 WEEKS 5 DAYS	6/10	8/10	3 KG	G	36.1	G	36.6	G	36.4	G	36.7	G	36.6	G	36.6
196	FARHAN MANU	31	II CM	G3P2L2	NIL	25/8/12	NVD	F	39 WEEKS 3 DAYS	7/10	9/10	2.6 KG	B	35.4	G	36.3	G	36.7	G	36.6	G	36.7	G	36.2
197	RENUKA	21	NCM	PRIMI	NIL	26/8/12	LSCS	F	35 WEEKS 5 DAYS	7/10	8/10	2.2 KG	G	36.2	G	36.2	G	36.6	G	36.6	G	36.2	G	36.7
198	SHYAMALA	21	NCM	PRIMI	NIL	27/8/12	NVD	F	41 WEEKS 3 DAYS	7/10	9/10	3.4 KG	G	36.6	G	36.7	G	36.1	G	36.5	G	36.8	G	36.5
199	CHANDRAMA	25	NCM	G3P2L2	NIL	28/8/12	NVD	F	42 WEEKS	6/10	9/10	3.23 KG	G	36.7	G	36.1	NR	NR	NR	NR	NR	NR	NR	NR
200	BHARATHAMA	25	II CM	G3P1L1A1	ANEMIA	28/8/12	LSCS	M	39 WEEKS 5 DAYS	8/10	9/10	2.9 KG	G	36.2	G	36.5	G	36.6	G	36.7	G	36.6	G	36.6
201	NAGARATHNA	20	NCM	PRIMI	NIL	28/8/12	NVD	F	38 WEEKS 5 DAYS	7/10	9/10	2.5 KG	G	36.5	G	36	G	36.6	G	36.4	G	36.4	G	35.9
202	NAGAMMA	25	NCM	PRIMI	NIL	29/8/12	NVD	M	36 WEEKS 4 DAYS	7/10	8/10	2 KG	B	35.3	G	36.3	G	36	G	36.6	G	36.5	G	36.5
203	NETHRAVATHI	23	II CM	G2P1L1	NIL	30/8/12	NVD	M	38 WEEKS 4 DAYS	8/10	9/10	2.6 KG	G	35.9	G	36	NR	NR	NR	NR	NR	NR	NR	NR
204	PUSHPA	25	II CM	PRIMI	NIL	30/8/12	NVD	F	37 WEEKS 3 DAYS	8/10	9/10	2.2 KG	G	35.9	G	36.6	G	36.5	G	36.4	G	36.6	G	36.6

MASTER CHART

205	CHANDRAKALA	20	II CM	PRIMI	NIL	30/8/12	NVD	F	39 WEEKS 1 DAY	8/10	9/10	2.5 KG	G	36	G	36.4	G	36.6	NR	NR	NR	NR	NR	NR
206	GAYATHRI	23	II CM	PRIMI	NIL	30/8/12	LSCS	F	41 WEEKS 2 DAYS	7/10	8/10	3.2 KG	G	36.3	G	36.1	B *	36 *	G	36.7	G	36.7	G	36.5
207	KAVITHA	28	NCM	G2A1	NIL	31/8/12	NVD	M	37 WEEKS 2 DAYS	7/10	8/10	2.35 KG	G	36.4	G	36.5	G	36.7	G	36.5	G	36.8	G	36.6
208	SHOBA	20	NCM	PRIMI	NIL	31/8/12	NVD	M	41 WEEKS 5 DAYS	7/10	8/10	3.5 KG	G	36.7	G	35.8	G	36.8	G	36.6	G	36.6	G	36.7
209	SUSHEELAMA	20	NCM	PRIMI	NIL	1/9/2012	NVD	M	39 WEEKS 5 DAYS	7/10	8/10	3 KG	G	36.3	G	35.9	NR	NR	NR	NR	NR	NR	NR	NR
210	AMARAVATHI	25	NCM	G3P2L2	NIL	1/9/2012	NVD	F	38 WEEKS 1 DAY	7/10	9/10	2.38 KG	G	36.4	G	36.1	G	36.3	G	36.6	G	36.3	G	36.3
211	MANJULA	25	II CM	G3A2	NIL	2/9/2012	LSCS	F	40 WEEKS 5 DAYS	7/10	9/10	2.95 KG	G	36.2	G	35.6	G	36.6	G	36.5	G	36.2	G	36
212	SWAPNA	22	II CM	G2P1L1	NIL	2/9/2012	NVD	M	41 WEEKS 2 DAYS	7/10	9/10	3.5 KG	G	35.9	G	36.5	NR	NR	NR	NR	NR	NR	NR	NR
213	SASHIKALA	22	NCM	G2P1L1	NIL	2/9/2012	LSCS	F	40 WEEKS 5 DAYS	7/10	8/10	3.3 KG	G	36.6	G	36.3	G	36.5	G	36.7	G	36.4	G	36.6
214	SHARADA	24	NCM	G2P1L1	NIL	3/9/2012	NVD	M	40 WEEKS 1 DAY	7/10	8/10	2.7 KG	G	36.4	G	36.6	NR	36.6	NR	NR	NR	NR	NR	NR
215	THABASUM	25	NCM	G2P1L1	NIL	3/9/2012	LSCS	F	38 WEEKS 5 DAYS	7/10	8/10	2.78 KG	G	36.2	G	36	G	36	G	36.6	G	36.6	G	36.2
216	SASIKALA	22	II CM	G3A2	NIL	3/9/2012	LSCS	F	38 WEEKS 5 DAYS	7/10	9/10	2.6 KG	G	36.1	B	35.4	G	36.7	G	36.8	G	36.1	G	36.5
217	ARUNDATHI	35	NCM	G3P1L1A1	NIL	3/9/2012	LSCS	M	38 WEEKS 4 DAYS	8/10	9/10	2.7 KG	G	35.9	G	36.4	G	36.4	G	36.6	G	36.8	G	36.6
218	SANGEETHA	20	NCM	PRIMI	NIL	3/9/2012	NVD	M	36 WEEKS 4 DAYS	7/10	8/10	2.2 KG	B	35.3	G	36	G	36.6	G	36.7	G	36.7	G	36.1
219	NETHRAVATHY	25	NCM	G2P1L1	NIL	4/9/2012	NVD	M	41 WEEKS 3 DAYS	6/10	8/10	3.75 KG	G	36.6	G	36.1	NR	NR	NR	NR	NR	NR	NR	NR
220	SOWMYA	20	NCM	PRIMI	NIL	4/9/2012	LSCS	F	38 WEEKS 1 DAY	5/10	7/10	2.5 KG	G	36.4	G	36.5	G	36.5	G	36.6	G	36.6	G	36.8
221	ARUNA	25	NCM	G2P1L1	NIL	4/9/2012	NVD	F	38 WEEKS 1 DAY	6/10	8/10	2.3 KG	G	36.3	G	36.2	G	36.8	G	36.5	G	36.3	G	36.7
222	ANURADHA	20	NCM	PRIMI	NIL	4/9/2012	NVD	M	39 WEEKS 1 DAY	7/10	8/10	2.5 KG	G	36.6	G	36.3	G	36.7	G	36.5	G	36.5	G	36.6
223	KAVITHA	30	II CM	G2P1L1	NIL	4/9/2012	NVD	M	39 WEEKS 4 DAYS	7/10	8/10	3 KG	G	36.3	G	35.9	NR	NR	NR	NR	NR	NR	NR	NR
224	SUVARNA	23	NCM	G2P1L1	NIL	5/9/2012	NVD	F	35 WEEKS 4 DAYS	8/10	9/10	2 KG	G	35.9	G	36.1	G	36.6	G	36.7	G	36.6	G	36.6
225	ASIFUNISA	20	NCM	PRIMI	NIL	5/9/2012	NVD	M	40 WEEKS 3 DAYS	7/10	8/10	3.2 KG	G	36.6	G	36.6	G	36.3	G	36.3	NR	NR	NR	NR
226	NAGAMANI	28	NCM	PRIMI	NIL	6/9/2012	NVD	F	40 WEEKS 5 DAYS	7/10	8/10	3 KG	G	36.4	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR
227	MANJAMMA	28	NCM	G2P1L1	NIL	6/9/2012	NVD	M	37 WEEKS 5 DAYS	7/10	9/10	2.3 KG	G	36.5	G	36.3	G	36.5	G	36.6	G	36.8	G	36.5

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#	Name	Age				Date		Sex	Weeks			Wt												
228	ANJAMMA	25	II CM	G2P1L1	SEVERE PRE ECLAMPSIA	6/9/2012	LSCS	M	36 WEEKS	6/10	8/10	1.8 KG	B	35.2	B	35.3	B	35.3	G	36	B	35.4	G	36.3
229	MANJULA	27	NCM	G2P1L1	NIL	7/9/2012	LSCS	F	41 WEEKS 5 DAYS	7/10	9/10	3.5 KG	G	36.6	G	36.1	G	36.7	G	36.7	G	36.4	G	36.6
230	KALAVATHY	25	NCM	G3P1L1D1	NIL	7/9/2012	LSCS	M	40 WEEKS 2 DAYS	7/10	9/10	2.9 KG	G	36.4	G	36.7	G	36.6	G	36.4	G	36	G	36.5
231	MOUNIKA	28	NCM	G2P1L1	NIL	8/9/2012	LSCS	F	37 WEEKS 4 DAYS	7/10	8/10	2.5 KG	G	36.4	G	36.5	G	36.6	G	36.4	G	36.8	G	36.6
232	UMA	20	NCM	PRIMI	NIL	8/9/2012	NVD	F	36 WEEKS	6/10	8/10	2.2 KG	G	36.2	B	35.4	B	35.4	G	36.7	G	36.6	G	36.7
233	MUNIRATHNA	23	NCM	G2P1L1	ANEMIA	9/9/2012	NVD	M	39 WEEKS	7/10	8/10	2.56 KG	G	36.1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
234	MUNIYAMMA	24	II CM	G3P2L2	NIL	10/9/12	NVD	F	38 WEEKS	7/10	9/10	2.41 KG	G	36.5	G	36.1	G	36.4	G	36.7	NR	NR	NR	NR
235	ROJA	18	NCM	PRIMI	NIL	10/9/12	LSCS	F	40 WEEKS 1 DAY	7/10	8/10	2.8 KG	G	36.6	G	36.4	G	36.7	G	36.6	G	36.5	G	36.6
236	VEENA	19	II CM	PRIMI	NIL	11/9/12	NVD	M	36 WEEKS 3 DAYS	6/10	9/10	2.1 KG	B	35.3	G	36.3	G	36.5	NR	NR	NR	NR	NR	NR
237	RAMAVATHI	24	NCM	G3P1L1A1	NIL	11/9/12	NVD	M	36 WEEKS 4 DAYS	7/10	8/10	1.8 KG	B	35.2	B	35.2	B	35.3	B	35.3	G	36.4	B	35.4
238	RAJESHWARI	27	NCM	PRIMI	NIL	12/9/12	LSCS	M	40 WEEKS 2 DAYS	7/10	9/10	3 KG	G	36.4	G	36.5	G	36.6	G	36.4	G	36.2	G	36.3
239	HEENA KOUSAR	20	NCM	PRIMI	SEVERE PRE ECLAMPSIA	12/9/12	NVD	F	36 WEEKS 2 DAYS	7/10	9/10	2 KG	B	35.2	G	36.1	B	35.3	G	36	G	36.3	G	36.5
240	SUPRIYA	23	NCM	G2A1	SEVERE PRE ECLAMPSIA	12/9/12	LSCS	F	37 WEEKS 3 DAYS	7/10	9/10	2.25 KG	G	36.1	G	36.6	G	36.5	G	36.6	G	36.6	G	36.1
241	MUNIRATHNA	22	NCM	G2P1L1	NIL	13/9/12	LSCS	M	39 WEEKS 1 DAY	7/10	8/10	2.6 KG	G	36.3	G	35.6	**G**	36.7	G	36.5	G	36.2	G	36.6
242	BABY	28	NCM	G2P1L1	NIL	13/9/12	LSCS	M	41 WEEKS 2 DAYS	7/10	8/10	3.2 KG	G	36.6	G	36.1	G	36.8	G	36.6	G	36.8	G	36.7
243	SHABISTHA ANJUM	26	NCM	PRIMI	NIL	14/9/12	NVD	F	38 WEEKS 5 DAYS	7/10	9/10	2.42 KG	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
244	MANJU VANI	22	II CM	PRIMI	SEVERE PRE ECLAMPSIA	14/9/12	LSCS	F	38 WEEKS 5 DAYS	7/10	8/10	2.56 KG	G	36.6	G	36	G	36.6	G	36.7	G	36.5	G	36.8
245	JEYASHREE	23	NCM	PRIMI	NIL	14/9/12	NVD	M	40 WEEKS 1 DAY	7/10	9/10	2.9 KG	B	35.4	G	36.5	B *	35.9 *	NR	NR	NR	NR	NR	NR
246	MAMATHA	25	II CM	G2P1L1	NIL	15/9/12	LSCS	F	38 WEEKS 4 DAYS	6/10	9/10	2.56 KG	G	36.2	G	36.1	G	36.7	G	36.4	G	36.6	G	36.4
247	ASHA	23	NCM	G2P1L1	NIL	16/9/12	LSCS	M	40 WEEKS 2 DAYS	7/10	9/10	2.9 KG	G	36.4	G	36.3	G	36.4	G	36.6	G	36.7	G	36.5
248	NAGALAKSHMI	22	NCM	PRIMI	NIL	16/9/12	LSCS	F	40 WEEKS 2 DAYS	7/10	9/10	3.2 KG	G	36.6	G	35.9	G	36	G	36.4	G	36.8	G	36.6
249	RENUKA	18	II CM	PRIMI	NIL	16/9/12	NVD	F	39 WEEKS 5 DAYS	8/10	9/10	2.6 KG	G	35.9	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR
250	ARUNA	25	NCM	G2P1L1	NIL	17/9/12	LSCS	M	39 WEEKS 2 DAYS	6/10	9/10	2.6 KG	G	36.1	G	36.6	G	36.6	G	36.8	G	36.4	G	36.7
251	PUSHPA	20	NCM	PRIMI	SEVERE PRE ECLAMPSIA	18/9/12	NVD	M	36 WEEKS	7/10	8/10	2 KG	B	35.2	B	35.3	B	35.3	G	36.6	G	36.3	G	36.3
252	NEEHAN TAJ	21	NCM	PRIMI	NIL	18/9/12	LSCS	F	38 WEEKS 5 DAYS	7/10	8/10	2.6 KG	G	36.4	G	36.2	G	36.1	G	36.7	G	36.1	G	36.6

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#	Name	Age				Date		Sex	Gestation			Weight												
253	SWETHA	21	NCM	PRIMI	NIL	19/9/12	NVD	F	40 WEEKS 1 DAY	8/10	9/10	2.8 KG	G	36.4	G	36.5	NR	NR	NR	NR	NR	NR	NR	NR
254	KALAIVANI	20	NCM	PRIMI	NIL	19/9/12	NVD	M	36 WEEKS 5 DAYS	6/10	8/10	2 KG	G	35.8	G	35.7	G	35.9	G	36.7	G	36.6	G	36.1
255	SUSHEELA RANI	35	II CM	G3P1L1A1	NIL	21/9/12	NVD	M	41 WEEKS 5 DAYS	6/10	8/10	3.5 KG	G	36.6	G	36	G	36.7	NR	NR	NR	NR	NR	NR
256	SHETAJ BEGUM	25	II CM	G3P2L2	NIL	21/9/12	LSCS	F	38 WEEKS 5 DAYS	7/10	8/10	2.4 KG	G	36.2	G	36.1	G	36.6	G	36.4	G	36.5	G	36.5
257	VARALAKSHMI	23	NCM	G2P1L1	NIL	22/9/12	LSCS	F	38 WEEKS 4 DAYS	7/10	8/10	2.4 KG	G	36.3	G	36.5	G	36.7	G	36.6	G	36.4	G	36.6
258	MANEMA	20	II CM	PRIMI	NIL	22/9/12	LSCS	F	37 WEEKS 1 DAY	7/10	9/10	2.27 KG	G	36.1		36.3	G	36.5	G	36.6	G	36.3	G	36.7
259	NAGAMANI	20	NCM	G2A1	NIL	22/9/12	NVD	M	37 WEEKS 1 DAY	6/10	8/10	2.5 KG	G	36.6	G	36.6	G	36.3	NR	NR	NR	NR	NR	NR
260	ROOPA	20	II CM	PRIMI	NIL	23/9/12	NVD	M	36 WEEKS 2 DAYS	7/10	9/10	2 KG	B	35.2	G	36.4	G	36.6	G	36.7	G	36	G	36.3
261	NOOR AHMEDI	23	NCM	G2P1L1	NIL	24/9/12	LSCS	F	40 WEEKS 2 DAYS	7/10	8/10	2.9 KG	B	35.3	G	36.2	G	36.6	G	36.4	G	36.8	G	36.6
262	MAMATHA	21	NCM	G2A1	SEVERE PRE ECLAMPSIA	24/9/12	LSCS	F	38 WEEKS 4 DAYS	7/10		2.4 KG	G	36.4		36.1	G	36	G	36.6	G	36.6	G	36.5
263	MAMATHA	22	NCM	G2P1L1	NIL	26/9/12	NVD	M	40 WEEKS 5 DAYS	8/10	9/10	3.3 KG	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
264	AMULYA	22	NCM	PRIMI	NIL	26/9/12	LSCS	M	38 WEEKS 1 DAY	5/10	8/10	2.04 KG	G	36.1	G	35.9	G	36.5	G	36.3	G	36.7	G	36.7
265	PARVATHAMA	28	II CM	G4P2L2A1	HBSAG +VE	26/9/12	LSCS	F	41 WEEKS 1 DAY	7/10	9/10	3.6 KG	G	36.4	G	36.5	G	36.7	G	36.4	G	36.5	G	36.3
266	NIGAR SULTANA	28	NCM	G3P1L1A1	NIL	27/9/12	LSCS	M	35 WEEKS 5 DAYS	5/10	8/10	1.88 KG	B	35.2	G	36.6	G	36.4	B	35.3	B	35.3	G	36.5
267	NAGARATHNA	23	NCM	G2P1L1	NIL	28/9/12	LSCS	M	38 WEEKS 1 DAY	7/10	9/10	2.3 KG	G *	35.4 *	G	36.1	B	35.4	G	36.7	G	36.6	G	36
268	AYESHA	22	NCM	PRIMI	NIL	29/9/12	LSCS	F	41 WEEKS 3 DAYS	7/10	9/10	3.3 KG	G	36.6	B	35.4	G	35.7	G	36.6	G	36.4	G	36.6
269	SHAKUNTHALA	24	II CM	G3P1A2	NIL	29/9/12	NVD	F	35 WEEKS 1 DAY	7/10	9/10	1.7 KG	B	35.3	B	35.1	G	36.6	G	36.4	G	36.2	B	35.3
270	PREMALATHA	29	NCM	G4P2L1D1A1	NIL	30/9/12	NVD	F	39 WEEKS 6 DAYS	7/10	9/10	2.8 KG	G	36.4	G	36.5	NR	NR	NR	NR	NR	NR	NR	NR
271	SUGUNA 1ST TWIN	19	NCM	PRIMI	NIL	1/10/12	NVD	M	37 WEEKS 5 DAYS	7/10	9/10	1.78 KG	B	35.3	B	35.2	B	35.3	G	36.7	G	36.8	G	36.3
272	SUGUNA 2ND TWIN	19	NCM	PRIMI	NIL	1/10/12	NVD	M	37 WEEKS 5 DAYS	7/10	8/10	1.71 KG	B	35.2	G	36.4	B	35.4	G	36.6	B	35.2	G	36.8
273	KALAVATHY	20	NCM	PRIMI	NIL	2/10/12	NVD	F	39 WEEKS 1 DAY	7/10	9/10	2.7 KG	G	36.6	G	36.3	NR	NR	NR	NR	NR	NR	NR	NR
274	UMA	24	NCM	PRIMI	NIL	3/10/12	LSCS	F	36 WEEKS 5 DAYS	7/10	9/10	2 KG	B	35.4	G	36.1	G	36.6	G	36.5	G	36.5	G	36.6
275	SHABANA36.3	26	NCM	G3P1L1A1	NIL	4/10/12	LSCS	M	42 WEEKS	7/10	9/10	3.5 KG	G	36.6	G	36.2	G	36.8	G	36.4	G	36.6	G	36.7
276	SUVARNA	27	NCM	PRIMI	NIL	4/10/12	LSCS	M	40 WEEKS 4 DAYS	7/10	9/10	3.23 KG	G	36.5	G	36.5	G	36.7	G	36.7	G	36.6	G	36.3

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No	Name	Age				Date		Sex	Gestation			Weight												
277	MALATHI	21	II CM	PRIMI	HBSAG +VE	4/10/12	LSCS	F	40 WEEKS 1 DAY	6/10	8/10	2.9 KG	G	36.2	G	36.1	G	36.5	G	36.6	G	36.4	G	36.1
278	AMARAMMA	21	NCM	G2P1L1	NIL	4/10/12	LSCS	F	35 WEEKS 2 DAYS	7/10	9/10	1.96 KG	B	35.2	G	36.4	B	35.4	G	36.7	G	36.4	G	36.5
279	REDDAMMA	30	NCM	G3P1L1A1	NIL	5/10/12	NVD	M	37 WEEKS 6 DAYS	7/10	9/10	2.6 KG	G	36	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR
280	SAHA KOUSER	22	NCM	PRIMI	NIL	5/10/12	LSCS	F	39 WEEKS 2 DAYS	7/10	9/10	2.8 KG	G	36.2	G	36	G	36.6	G	36.6	G	36.3	G	36.6
281	PUSHPA	22	NCM	PRIMI	NIL	6/10/12	NVD	F	35 WEEKS 2 DAYS	7/10	9/10	1.7 KG	B	35.2	B	35.2	G	36.3	G	36.6	G	36.8	B	35.4
282	SHILPA	20	NCM	PRIMI	NIL	6/10/12	NVD	M	39 WEEKS 5 DAYS	8/10	9/10	2.7 KG	B	35.4	G	36.4	G	36.6	NR	NR	NR	NR	NR	NR
283	GANGARATHHNA	35	NCM	G4P3L3	NIL	7/10/12	NVD	F	40 WEEKS 1 DAY	7/10	9/10	3 KG	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
284	PAVITHRA	23	NCM	G2P1L1	NIL	7/10/12	LSCS	M	37 WEEKS 1 DAY	7/10	9/10	2.25 KG	G	35.8	B	35.3	G	36.4	G	36.6	G	36.5	G	36.7
285	AYESHA	23	II CM	G4P2L2A1	NIL	8/10/12	LSCS	M	39 WEEKS 1 DAY	7/10	9/10	2.7 KG	G	36.2	G	36.1	G	36.7	G	36.7	G	36.6	G	36.5
286	RAHIYA KOUSAR	20	NCM	PRIMI	ECLAMPSIA	8/10/12	LSCS	F	38 WEEKS 1 DAY	5/10	8/10	2.6 KG	G	35.9	G	36.3	G	36.6	G	36.5	G	36.7	G	36.4
287	THIRUMALAR	28	NCM	G2P1L1	NIL	8/10/12	NVD	F	37 WEEKS 6 DAYS	7/10	9/10	2.5 KG	G	36.4	G	36.5	G	36.8	NR	NR	NR	NR	NR	NR
288	KAVITHAMA	30	NCM	G2P1L1	NIL	8/10/12	LSCS	M	39 WEEKS 4 DAYS	7/10	9/10	3 KG	G	36.6	G	36.3	G	36.3	G	36.6	G	36.6	G	36.3
289	SHILPA	22	NCM	G2P1L1	NIL	9/10/12	NVD	M	36 WEEKS 4 DAYS	6/10	8/10	1.7 KG	B	35.3	B	35.2	B	35.2	B	35.4	G	36.4	B	35.3
290	SARASA 1ST TWIN	22	NCM	G2P1L1	NIL	9/10/12	LSCS	F	38 WEEKS	7/10	8/10	2.05 KG	B	35.3	G	35.9	B	35.4	B	35.4	G	36.3	G	36.6
291	SARASA 2ND TWIN	22	NCM	G2P1L1	NIL	9/10/12	LSCS	F	38 WEEKS	7/10	8/10	1.7 KG	B	35.2	B	35.3	G	36.6	G	36.7	G	36.8	G	36.5
292	KAVITHA	22	NCM	PRIMI	NIL	10/10/12	NVD	M	36 WEEKS 5 DAYS	7/10	9/10	1.74 KG	B	35.2	G	36.4	B	35.2	G	36.4	G	36.6	G	36.7
293	RA36.3IKA	30	II CM	G3P1L1A1	NIL	10/10/12	LSCS	F	35 WEEKS 2 DAYS	8/10	9/10	1.9 KG	G *	35.3 *	G	36.1	B	35.4	G	36.1	G	36.5	G	36.1
294	GAYATHRI	22	NCM	G2P1L1	EPILEPSY	11/10/12	NVD	F	37 WEEKS 6 DAYS	8/10	9/10	2.5 KG	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
295	NANDU	20	NCM	PRIMI	NIL	12/10/12	LSCS	M	36 WEEKS 2 DAYS	7/10	8/10	2 KG	B	35.3	G	36.3	G	36.7	G	36.6	G	36.6	G	36.6
296	GOWTHAMI	23	NCM	G2P1L1	NIL	12/10/12	NVD	M	41 WEEKS 2 DAYS	7/10	9/10	3.3 KG	B	35.4	G	36.5	NR	NR	NR	NR	NR	NR	NR	NR
297	PADMAVATHY	24	II CM	G3A2	NIL	12/10/12	NVD	F	42 WEEKS 4 DAYS	8/10	9/10	3.7 KG	G	36.6	G	36.2	G	36.4	G	36.7	G	36.5	G	35.9
298	CHAITHRA	28	II CM	G2P1L1	NIL	13/10/12	NVD	F	39 WEEKS 4 DAYS	8/10	9/10	2.7 KG	G	36	G	36	G	36.3	G	36.4	NR	NR	NR	NR
299	SUSHMA	29	NCM	G2P1L1	NIL	13/10/12	LSCS	M	40 WEEKS 3 DAYS	7/10	8/10	2.9 KG	G	36.2	G	36.1	G	36.7	G	36.6	G	36.7	G	36.8
300	KALPANA	28	II CM	G6P4L3A2	NIL	15/10/12	NVD	M	37 WEEKS 1 DAY	5/10	8/10	2.1 KG	B	35.4	G	36.6	B	35.4	G	36	G	36.2	G	36.3

MASTER CHART

No.	Name	Age	Class	Parity	Complication	Date	Mode	Sex	Gestation	A1	A2	Weight												
301	ASHARANI	20	NCM	PRIMI	NIL	15/3/13	NVD	M	39 WEEKS 1 DAY	7/10	8/10	2.8 KG	G	36.6	G	36.4	G	36.6	G	36.7	G	36.6	G	36.5
302	CHANDRAKALA	19	II CM	PRIMI	NIL	15/3/13	NVD	F	39 WEEKS	8/10	9/10	2.8 KG	G	36.2	G	36.3	B	35.4	G	36.6	G	36.8	G	36.6
303	NAGARATHNA	34	NCM	G2P1L1	NIL	15/3/13	NVD	F	40 WEEKS 2 DAYS	8/10	9/10	2.9 KG	G	36.4	G	36.5	NR	NR	NR	NR	NR	NR	NR	NR
304	RANI	20	NCM	PRIMI	NIL	16/3/13	NVD	M	38 WEEKS	7/10	8/10	2.37 KG	G	36.2	B	35.2	G	36	G	36.6	G	36.5	G	36.7
305	SHA36.3IYA	22	NCM	PRIMI	NIL	16/3/13	LSCS	F	39 WEEKS	7/10	9/10	2.5 KG	G	36.1	G	36.1	G	36.6	G	36.7	G	36.4	G	36.4
306	RENUKA	29	NCM	PRIMI	SEVERE PRE ECLAMPSIA	16/3/13	LSCS	M	37 WEEKS 2 DAYS	7/10	9/10	2.17 KG	G	35.9	G	35.9	G	36.2	G	36.5	G	36.6	G	36.2
307	KAVYA	19	NCM	PRIMI	NIL	16/3/13	LSCS	M	39 WEEKS 5 DAYS	7/10	9/10	3.1 KG	G	36	G	36.2	G	36.7	G	36.6	G	36.8	G	36.6
308	CHOWDESHWARI	20	NCM	PRIMI	NIL	16/3/13	LSCS	F	39 WEEKS 5 DAYS	7/10	9/10	2.8 KG	G	35.6	G	36.4	G	36	G	36.3	G	36.6	G	36.5
309	PREMA	20	NCM	PRIMI	NIL	17/3/13	NVD	F	39 WEEKS	7/10	9/10	2.4 KG	G	36.1	G	36	G	36.6	G	36.6	NR	NR	NR	NR
310	NIRMALA	23	II CM	PRIMI	NIL	17/3/13	NVD	M	39 WEEKS	7/10	9/10	3 KG	G	35.9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
311	MANJULAMMA	32	II CM	G2P1L1	NIL	18/3/13	NVD	F	40 WEEKS 5 DAYS	8/10	9/10	3.1 KG	G	36.6	G	36.1	G	35.9	G	36.6	G	36.6	G	36.8
312	PREMA	20	NCM	PRIMI	NIL	18/3/13	NVD	F	39 WEEKS 5 DAYS	7/10	9/10	2.7 KG	G	36.1	G	36.3	G	36.8	NR	NR	NR	NR	NR	NR
313	MAMATHA	33	II CM	G2P1L1	SEVERE PRE ECLAMPSIA	18/3/13	LSCS	F	41 WEEKS 2 DAYS	7/10	9/10	3.5 KG	G	36.4	G	36.5	G	36.5	G	36.8	G	36.6	G	36.3
314	ARBEEN TAJ	25	NCM	G3P1L1A1	NIL	18/3/13	LSCS	M	41 WEEKS 2 DAYS	7/10	9/10	3.2 KG	G	36	G	36.6	G	36.7	G	36.7	G	36.4	G	36.6
315	MANJULA	35	II CM	PRIMI	GESTATIONAL HT	19/3/13	LSCS	M	40 WEEKS 4 DAYS	6/10	9/10	2.3 KG	B	35.2	G	35.6	G	36.1	G	36.4	G	36.8	G	36.7
316	KAVITHA	22	NCM	G3P1A1D1	NIL	19/3/13	NVD	M	40 WEEKS 2 DAYS	7/10	9/10	2.7 KG	G	36.1	G	36.1	G	36.6	NR	NR	NR	NR	NR	NR
317	SUJATHAMMA	28	II CM	G2P1L1	NIL	19/3/13	NVD	F	41 WEEKS 4 DAYS	8/10	9/10	3.3 KG	G	36.5	G	35.9	G	36.3	G	36.6	G	36.6	G	36.4
318	ROJA	24	II CM	G2P1L1	NIL	19/3/13	NVD	F	41 WEEKS 2 DAYS	7/10	9/10	3.1 KG	G	36.1	G	36	G	35.7	G	36.7	G	36.5	G	36.5
319	VARALAKSHMI	25	NCM	G3P1L1A1	NIL	19/3/13	NVD	M	40 WEEKS 2 DAYS	7/10	9/10	2.8 KG	B	35.4	G	36.4	G	36.4	G	36.6	NR	NR	NR	NR
320	USHA	22	NCM	PRIMI	NIL	19/3/13	NVD	F	40 WEEKS 4 DAYS	8/10	9/10	3.17 KG	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
321	MUNIRATHNA	20	NCM	PRIMI	NIL	19/3/13	NVD	M	40 WEEKS 2 DAYS	8/10	9/10	3 KG	G	36.7	G	36.3	G	36.7	G	36.4	G	36.6	G	36.6
322	SATYADEVI	28	NCM	G2P1L1	NIL	20/3/13	LSCS	M	39 WEEKS 1 DAY	8/10	9/10	2.5 KG	G	35.9	G	36.2	G	36.6	G	36.7	G	36.4	G	36.7
323	GULAABJAAN	25	NCM	PRIMI	NIL	20/3/13	NVD	F	38 WEEKS 5 DAYS	7/10	9/10	2.42 KG	G	36.2	G	36.5	G	36.8	G	36.3	G	36.8	G	36.3
324	MANJULA	20	NCM	PRIMI	NIL	20/3/13	NVD	M	37 WEEKS	7/10	9/10	2 KG	G	36.4	G	36.1	B	35.3	G	36.6	NR	NR	NR	NR
325	VEENA	30	II CM	G2P1L1	NIL	20/3/13	NVD	F	39 WEEKS 2 DAYS	8/10	9/10	2.9 KG	G	36.4	G	35.9	G	36	NR	NR	NR	NR	NR	NR
326	LAVANYA	20	II CM	PRIMI	NIL	21/3/13	NVD	M	39 WEEKS 4 DAYS	8/10	9/10	2.6 KG	G	36	G	36.6	G	36.5	G	36.4	G	36.6	G	36.6

MASTER CHART

No.	Name	Age		Gravida	History	Date	Delivery	Sex	Gestation	Apgar1	Apgar2	Weight		T1		T2		T3		T4		T5		T6
327	SUNITHA	25	NCM	PRIMI	NIL	21/3/13	LSCS	M	38 WEEKS 5 DAYS	8/10	9/10	2.64 KG	G	36.2	G	36.3	G	36.6	G	36.6	G	36.7	G	36.5
328	RAJANI	28	NCM	PRIMI	NIL	21/3/13	NVD	F	39 WEEKS 6 DAYS	6/10	8/10	2.58 KG	G	36.4	G	36	G	36.4	G	36.7	G	36.2	G	36.6
329	PRATHIMA	20	II CM	G2P1D1	NIL	22/3/13	NVD	F	40 WEEKS 3 DAYS	8/10	9/10	2.98 KG	G	36	G	36.4	G	36.7	NR	NR	NR	NR	NR	NR
330	SHANTHI	22	NCM	G2P1L1	NIL	23/3/13	NVD	F	37 WEEKS 1 DAY	7/10	8/10	2.14 KG	**B**	**35.2**	G	36.1	G	36.1	G	36.5	G	36.3	G	36
331	GEETHA	20	II CM	G2A1	NIL	23/3/13	NVD	F	41 WEEKS 4 DAYS	7/10	9/10	2.8 KG	G	36.4	G	36.2	G	36.6	G	36.6	NR	NR	NR	NR
332	RENUKA	22	II CM	G2P1L1	NIL	23/3/13	NVD	F	40 WEEKS 3 DAYS	6/10	9/10	2.75 KG	G	36.2	G	36.5	G	36.8	G	36.6	G	36.8	G	36.3
333	SHABREEN TAJ	20	II CM	PRIMI	NIL	23/3/13	NVD	M	38 WEEKS	6/10	9/10	2.24 KG	G	36.1	G	36	G	36.3	NR	NR	NR	NR	NR	NR
334	SANGEETHA	22	NCM	G2A1	NIL	23/3/13	LSCS	M	39 WEEKS	6/10	9/10	2.4 KG	**B**	**35.2**	G	35.6	G	35.8	G	36.6	G	36.6	G	36.1
335	TASMA SULTANA	20	NCM	PRIMI	NIL	24/3/13	NVD	F	35 WEEKS 3 DAYS	6/10	8/10	1.98 KG	**B**	**35.3**	**B**	**35.4**	**B**	**35.3**	G	36.7	G	36.5	G	36.6
336	PAVITHRA	20	II CM	PRIMI	NIL	24/3/13	NVD	F	42 WEEKS 1 DAY	6/10	8/10	2.85 KG	G	36.1	G	36.6	G	36.7	NR	NR	NR	NR	NR	NR
337	ANURADHA	26	NCM	G2A1	NIL	24/3/13	LSCS	M	41 WEEKS 5 DAYS	7/10	9/10	3.16 KG	G	36.4	G	36.4	G	36.6	G	36.7	G	36.4	G	36.4
338	GEETHA 1ST TWIN	22	II CM	PRIMI	SEVERE PRE ECLAMPSIA	24/3/13	LSCS	M	36 WEEKS 6 DAYS	6/10	8/10	1.92 KG	**B**	**35.2**	G	36.1	**B**	**35.3**	G	36.4	G	36.6	G	36.5
339	GEETHA 2ND TWIN	22	II CM	PRIMI	NIL	24/3/13	LSCS	M	36 WEEKS 6 DAYS	6/10	8/10	1.98 KG	**B**	**35.3**	G	36.3	G	36.4	G	36.6	G	36.2	G	36.1
340	SONIA	23	NCM	G2A1	NIL	25/3/13	NVD	F	40 WEEKS 3 DAYS	8/10	9/10	2.8 KG	G	35.9	G	36.5	NR	NR	NR	NR	NR	NR	NR	NR
341	HEMA	25	NCM	PRIMI	NIL	25/3/13	LSCS	F	39 WEEKS 3 DAYS	7/10	9/10	2.43 KG	G	35.9	G	36.6	G	36.7	G	36.8	G	36.6	G	36.7
342	DEVI	25	NCM	PRIMI	NIL	26/3/13	LSCS	M	40 WEEKS 3 DAYS	7/10	9/10	3.4 KG	G	36.6	G	36.2	G	36.5	G	36.5	G	36.6	G	36.6
343	SUMA	28	NCM	G2P1L1	NIL	26/3/13	LSCS	M	40 WEEKS 1 DAY	7/10	9/10	3 KG	G	36.1	G	36.1	G	36.6	G	36.7	G	36.8	G	36.8
344	ASMA BEGUM	22	NCM	PRIMI	NIL	27/3/13	NVD	F	39 WEEKS 4 DAYS	7/10	9/10	2.76 KG	G	36.2	**B**	**35.3**	G	36	G	36.2	NR	NR	NR	NR
345	SHASHIKALA	27	NCM	PRIMI	K/C/O RHD	27/3/13	NVD	M	39 WEEKS	7/10	9/10	2.4 KG	G	36.2	G	36.2	G	36.8	G	36.6	G	36.7	G	36.5
346	MAMATHA	26	NCM	G3P1L1D1	K/C/OHYPERTHYROIDISM	27/3/13	LSCS	M	39 WEEKS 1 DAY	7/10	9/10	2.5 KG	G	36.1	G	36.4	G	36.6	G	36.7	G	36.6	G	36.6
347	ROJAVATHI	23	NCM	G2P1L1	NIL	27/3/13	LSCS	F	39 WEEKS 4 DAYS	7/10	9/10	2.65 KG	G	36	G	36.6	G	36.4	G	36.6	G	36.5	G	36.3
348	SUDHA	25	NCM	G2P1L1	GESTATIONAL HT	28/3/13	NVD	F	41 WEEKS 5 DAYS	6/10	9/10	2.89 KG	G	36.2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
349	GEETHA	32	II CM	G4P1L1A2	K/C/O HYPOTHYROIDISM	28/3/13	NVD	M	42 WEEKS	6/10	9/10	3.5 KG	G	36.6	G	36.3	G	35.7	G	36	NR	NR	NR	NR
350	MALANI	19	NCM	G2A1	NIL	28/3/13	LSCS	M	39 WEEKS 1 DAY	7/10	9/10	2.6 KG	G	35.7	G	35.6	G	36.7	G	36.7	G	36.5	G	36.7

MASTER CHART

No	Name	Age		Obs	Complication	Date	Mode	Sex	Gestation			Weight												
351	SUBASHINI	26	II CM	G4A3	NIL	28/3/13	LSCS	M	41 WEEKS 1 DAY	7/10	9/10	3.23 KG	G	35.9	G	36.5	G	36.8	G	36.7	G	36.6	G	35.9
352	SALEEMISA BEGUM	20	NCM	PRIMI	NIL	28/3/13	LSCS	F	40 WEEKS 4 DAYS	6/10	8/10	2.75 KG	G	36.1	G	36.1	G	35.9	G	36.6	G	36.7	G	36.6
353	ASHA	20	NCM	PRIMI	NIL	29/3/13	NVD	M	39 WEEKS	7/10	9/10	2.42 KG	G *	35.4 *	G	35.9	G	36.7	G	36.5	G	36.8	G	36.5
354	YASHODA	22	NCM	PRIMI	NIL	29/3/13	NVD	F	41 WEEKS 3 DAYS	7/10	9/10	3.23 KG	G	36.2	G	36.3	NR	NR	NR	NR	NR	NR	NR	NR
355	SARASAMMA	25	NCM	PRIMI	NIL	29/3/13	NVD	F	38 WEEKS 2 DAYS	7/10	9/10	2.43 KG	G	36.3	G	36.4	G	36.3	G	36.6	NR	NR	NR	NR
356	ANUSHA	20	II CM	PRIMI	NIL	29/3/13	NVD	M	36 WEEKS 4 DAYS	6/10	8/10	1.97 KG	G	35.7	B	35.2	B	35.2	G	36	G	36.6	B	35.4
357	HA36.3IRA BANU	20	NCM	G2P1L1	NIL	30/3/13	LSCS	F	40 WEEKS 3 DAYS	6/10	8/10	2.9 KG	G	36	G	36.6	G	36.6	G	36.7	G	36.4	G	36.6
358	MAMATHA	22	NCM	PRIMI	NIL	30/3/13	NVD	M	40 WEEKS 5 DAYS	7/10	9/10	3.1 KG	G	36.6	G	36.1	G	36	G	36.4	NR	NR	NR	NR
359	SUDHA	21	II CM	PRIMI	NIL	31/3/13	NVD	F	41 WEEKS 5 DAYS	8/10	9/10	3.41 KG	G	36.3	G	36.5	G	36.7	G	36.6	G	36.6	G	36.8
360	SUDHA	22	NCM	PRIMI	HBSAG +VE	31/3/13	NVD	M	41 WEEKS 3 DAYS	8/10	9/10	3.4 KG	B	35.4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
361	NAGAVENI	22	NCM	PRIMI	NIL	31/3/13	NVD	M	40 WEEKS 1 DAY	7/10	9/10	2.3 KG	G	36	G	36.5	G	36.4	G	36.7	G	36.8	G	36.6
362	MAMATHA	20	NCM	PRIMI	NIL	31/3/13	NVD	M	36 WEEKS 1 DAY	6/10	8/10	2.3 KG	G	36.1	B	35.3	B	35.4	G	35.9	NR	NR	NR	NR
363	BINDU	28	II CM	G2P1L1	NIL	31/3/13	NVD	F	40 WEEKS 5 DAYS	7/10	9/10	2.61 KG	G	36.2	G	36.1	G	36.5	NR	NR	NR	NR	NR	NR
364	ABHIYA KHANUM	23	NCM	PRIMI	NIL	31/3/13	NVD	F	40 WEEKS 1 DAY	8/10	9/10	2.68 KG	G	36.2	G	36.3	G	36.7	G	36.6	G	36.6	G	36.3
365	MAMATHA	20	II CM	PRIMI	NIL	1/4/2013	NVD	M	35 WEEKS 5 DAYS	7/10	9/10	1.9 KG	B	35.2	G *	35.4 *	G	36.6	G	36.4	B	35.3	G	36.5
366	SHYAMALA	21	NCM	PRIMI	NIL	1/4/2013	LSCS	M	40 WEEKS 2 DAYS	7/10	9/10	2.77 KG	G	36	G	36.6	G	36.8	G	36.5	G	36.7	G	36.6
367	KALPANA	23	NCM	G3P1L1A1	GESTATIONAL HT	1/4/2013	LSCS	F	38 WEEKS 6 DAYS	8/10	9/10	2.56 KG	B	35.4	G	36.4	G	36.6	G	36.6	G	36.6	G	36.7
368	NAGAMANI	23	NCM	G2P1L1	NIL	2/4/2013	LSCS	F	42 WEEKS 2 DAYS	7/10	9/10	4.1 KG	G	36.6	G	36.2	G	35.9	G	36.7	G	36.8	G	36.4
369	ARBIN KHANUM	19	NCM	PRIMI	NIL	2/4/2013	NVD	M	41 WEEKS 1 DAY	8/10	9/10	3.15 KG	G	36.3	G	36.1	NR	NR	NR	NR	NR	NR	NR	NR
370	JYOTHI	25	NCM	PRIMI	PROM	2/4/2013	NVD	M	39 WEEKS 2 DAYS	8/10	9/10	2.7 KG	G	36.3	G	36	G	36.4	G	36.6	G	36.6	G	36.6
371	NAGAMMA	22	NCM	PRIMI	NIL	2/4/2013	NVD	F	39 WEEKS 5 DAYS	7/10	9/10	3.02 KG	G	36.6	G	36.5	NR	NR	NR	NR	NR	NR	NR	NR
372	NAGAVENI	23	II CM	PRIMI	NIL	3/4/2013	LSCS	M	36 WEEKS 1 DAY	7/10	9/10	2 KG	B	35.2	B	35.3	G	36.7	G	36.6	G	36.5	G	36
373	AMANYA	23	II CM	G3P2L2	NIL	3/4/2013	NVD	M	36 WEEKS 1 DAY	6/10	8/10	1.92 KG	B	35.3	G	36.3	B	35.3	G	36.7	G	36.2	G	36.5
374	CHANDRAMMA	22	II CM	G2P1L1	NIL	4/4/2013	NVD	F	40 WEEKS 2 DAYS	6/10	8/10	3.1 KG	G	36.1	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR

MASTER CHART

375	BHAGYALAKSHMI	20	NCM	PRIMI	NIL	4/4/2013	LSCS	M	41 WEEKS 2 DAYS	7/10	9/10	3.5 KG	G	36.6	G	36.1	G	36.6	G	36.3	G	36.7	G	36.4
376	ARFAN MEHRAJ	25	NCM	G2P1L1	NIL	4/4/2013	NVD	M	36 WEEKS	6/10	8/10	1.88 KG	B	35.2	B	35.3	G	36.1	B	35.4	G	36.8	G	36.6
377	BHAVYA	23	II CM	PRIMI	EPILEPSY	4/4/2013	LSCS	M	41 WEEKS	7/10	9/10	3.2 KG	G	36	G	36.6	G	36.6	G	36.8	G	36.6	G	36.1
378	ADHILAKSHMI	30	NCM	G2P1D1	NIL	5/4/2013	LSCS	F	40 WEEKS 4 DAYS	7/10	9/10	3 KG	G	36.2	G	36.1	G	36.7	G	36.6	G	36.5	G	36.5
379	KAVITHA	20	NCM	PRIMI	NIL	5/4/2013	NVD	M	40 WEEKS 4 DAYS	7/10	9/10	2.6 KG	G	36.3	G	36.3	NR	NR	NR	NR	NR	NR	NR	NR
380	KAVITHA	22	NCM	PRIMI	NIL	5/4/2013	NVD	M	39 WEEKS 4 DAYS	6/10	9/10	2.67 KG	G	36.2	G	36.5	G	36.8	G	36.7	G	36.4	G	36
381	ASHA	22	II CM	PRIMI	NIL	5/4/2013	NVD	F	37 WEEKS 3 DAYS	7/10	9/10	2.15 KG	B	35.2	B	35.3	G	36.7	G	36.4	G	36.6	G	36.7
382	VENKATALAKSHMI	30	NCM	G2P1L1	NIL	6/4/2013	LSCS	M	41 WEEKS 4 DAYS	7/10	9/10	3.44 KG	G	36.6	G	36.4	G	36.6	G	36.6	G	36.8	G	36.1
383	HASEENA TAJ	26	II CM	G2P1L1	NIL	6/4/2013	NVD	M	41 WEEKS 2 DAYS	6/10	9/10	3.13 KG	G	36.2	G	36.5	NR	NR	NR	NR	NR	NR	NR	NR
384	BHAGYA	23	NCM	G2P1L1	SEVERE PRE ECLAMPSIA	7/4/2013	NVD	F	39 WEEKS	6/10	8/10	2,5 KG	G	36.3	G	36.1	G	36.6	G	36.7	G	36.7	G	36.7
385	LALITHA	20	NCM	PRIMI	NIL	8/4/2013	LSCS	M	39 WEEKS 1 DAY	7/10	9/10	2.46 KG	G	36	G	36.6	G	36.3	G	36.6	G	36.4	G	36.5
386	LAVANYA	23	NCM	PRIMI	NIL	9/4/2013	LSCS	M	40 WEEKS 5 DAYS	7/10	9/10	3.02 KG	G	36.6	G	36.4	G	36.5	G	36.5	G	36.6	G	36
387	UMA	21	II CM	PRIMI	NIL	9/4/2013	LSCS	F	36 WEEKS 5 DAYS	7/10	9/10	2.18 KG	G	36	B	35.4	B	35.4	G	35.9	G	36.5	G	36.3
388	RATHNAMA	23	NCM	PRIMI	NIL	9/4/2013	NVD	M	40 WEEKS 5 DAYS	8/10	9/10	3 KG	G	36.1	B	35.3	G	36.6	G	36.6	G	36.6	G	36.6
389	YASMEEN	24	II CM	G2P1L1	NIL	9/4/2013	LSCS	M	39 WEEKS 5 DAYS	7/10	9/10	3.02 KG	G	36.3	G	36.3	G	36.7	G	36.7	G	36.8	G	36.8
390	MANJULA	20	II CM	PRIMI	RETRO POSITIVE	9/4/2013	NVD	F	41 WEEKS	8/10	9/10	2.82 KG	G	36.4	G	36.1	NR	NR	NR	NR	NR	NR	NR	NR
391	ASHWINI	22	NCM	G3P1L1A1	NIL	9/4/2013	LSCS	M	40 WEEKS 5 DAYS	7/10	9/10	2.67 KG	G	35.9	G	35.9	G	36.7	G	36.5	G	36.6	G	36.6
392	ANITHA	20	II CM	PRIMI	K/C/O HYPOTHYROIDISM	10/4/13	NVD	M	40 WEEKS 2 DAYS	8/10	9/10	2.8 KG	G	36.2	G	36.6	G	36	G	36	G	36.2	G	36.7
393	GAYATHRI	29	NCM	G2P1L1	GESTATIONAL DM	10/4/13	LSCS	M	41 WEEKS	8/10	9/10	4.75 KG	G	36.7	G	36.2	G	36.4	G	36.6	G	36.8	G	36.4
394	NALINI	23	NCM	PRIMI	NIL	10/4/13	NVD	F	40 WEEKS 5 DAYS	8/10	9/10	3 KG	G	36.2	G	36.4	G	36.3	G	36.7	G	36.6	G	36.5
395	SHALIMA	22	NCM	G2P1L1	RETRO POSITIVE	11/4/13	NVD	M	39 WEEKS 1 DAY	8/10	9/10	2.2 KG	B	35.3	G	35.6	G	36.7	NR	NR	NR	NR	NR	NR
396	NAHEERA	20	II CM	G3P2L2	NIL	11/4/13	LSCS	M	41 WEEKS 2 DAYS	6/10	9/10	3.38 KG	G	36.3	G	36.1	G	36.6	G	36.8	G	36.4	G	36.6
397	NAGEEN TAJ	23	NCM	PRIMI	SEVERE PRE ECLAMPSIA	11/4/13	LSCS	M	40 WEEKS 3 DAYS	7/10	9/10	3.02 KG	G	36.2	G	36.3	G	36.4	G	36.4	G	36.3	G	36.2

MASTER CHART

No	Name	Age		Obstetric	Complication	Date	Mode	Sex	Gestation	Apgar 1	Apgar 2	Weight												
398	SOWMYA	28	NCM	G2P1L0	K/C/O HYPOTHYROIDISM	12/4/13	LSCS	F	38 WEEKS 5 DAYS	7/10	9/10	2.25 KG	B	35.2	G	36.5	B	35.3	G	36.7	G	36.6	G	36.3
399	MUBARAK	22	NCM	G3P1L1A1	NIL	12/4/13	LSCS	M	41 WEEKS	7/10	9/10	2.83 KG	G	36	G	35.7	G	36.8	G	36.6	G	36.7	G	36.6
400	SUMITHRA	21	NCM	G3P2L1D1	NIL	12/4/13	NVD	M	39 WEEKS 1 DAY	7/10	9/10	2.5 KG	G	36.1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
401	TASNEEM 1ST TWIN	35	NCM	G3P2L2	NIL	13/4/13	NVD	M	36 WEEKS 3 DAYS	7/10	9/10	2.3 KG	G	36.3	G	36.6	G	36.7	G	36.6	G	36.5	G	36.1
402	TASNEEEM 2ND TW	35	NCM	G3P2L2	NIL	13/4/13	NVD	M	36 WEEKS 3 DAYS	7/10	9/10	2.5 KG	G	36.2	G	36.1	G	36.6	G	36.3	G	36.8	G	36.6
403	AMBIKA	19	NCM	PRIMI	SEVERE PRE ECLAMPSIA	13/4/13	LSCS	F	36 WEEKS 1 DAY	6/10	9/10	1.9 KG	G	35.7	B	35.2	B	35.4	G	36.6	G	36.6	G	36.6
404	PUSHPA	22	II CM	G2P1L1	NIL	13/4/13	NVD	M	40 WEEKS 1 DAY	7/10	9/10	2.88 KG	B	35.3	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR
405	SHANTHI	24	NCM	PRIMI	NIL	14/4/13	NVD	F	39 WEEKS	7/10	9/10	2.38 KG	G	35.9	G	36.3	G	36.7	G	36.7	G	36.4	G	36.7
406	MALA	19	NCM	PRIMI	NIL	14/4/13	NVD	M	39 WEEKS 4 DAYS	7/10	9/10	2.78 KG	G	36	G	36.2	G	36.5	G	36.5	G	36.6	G	36.8
407	KAVITHA	21	II CM	PRIMI	NIL	15/4/13	NVD	M	37 WEEKS	7/10	9/10	2 KG	B	35.1	B	35.3	G	36.6	G	36.6	G	36.7	G	36.5
408	TANVEER ANJUM	22	NCM	PRIMI	NIL	15/4/13	NVD	M	41 WEEKS 1 DAY	7/10	9/10	3 KG	G	36.4	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR
409	ASHA RANI	19	II CM	PRIMI	NIL	16/4/13	NVD	F	37 WEEKS 5 DAYS	6/10	8/10	2.2 KG	G	35.9	G	36.1	G	36.8	G	36.7	G	36.6	G	36.7
410	HEMALATHA	21	NCM	G2P1L1	NIL	17/4/13	LSCS	M	42 WEEKS 1 DAY	7/10	9/10	3.26 KG	G	36.3	G	36.5	G	36.6	G	36.4	G	36.8	G	36.6
411	PRIYANKA	19	NCM	PRIMI	NIL	17/4/13	NVD	M	41 WEEKS	7/10	9/10	3.1 KG	G	36.6	G	36	G	36.4	NR	NR	NR	NR	NR	NR
412	RAJESHWARI	28	NCM	G3P2L1D1	NIL	18/4/13	LSCS	F	37 WEEKS	7/10	9/10	2.55 KG	G	36	G	36.4	G	36.6	G	36.6	G	36.2	G	36.5
413	GEETHA	27	NCM	G2P1L1	NIL	19/4/13	LSCS	F	38 WEEKS	7/10	9/10	2.23 KG	G	36.2	B	35.3	G	36.1	G	36.4	G	36.5	G	36.3
414	LAKSHMI	19	II CM	PRIMI	NIL	19/4/13	LSCS	M	37 WEEKS	7/10	9/10	1.96 KG	B	35.3	G	36.1	G	36.6	B	35.4	G	36.6	G	36.7
415	GAYATHRI	25	NCM	G2P1L1	NIL	19/4/13	LSCS	M	39 WEEKS 5 DAYS	8/10	9/10	2.57 KG	G	36.4	G	35.9	B	35.3	G	36.7	G	36.7	G	36.5
416	RAMYA	20	II CM	PRIMI	ANEMIA	20/4/13	NVD	F	38 WEEKS 5 DAYS	7/10	9/10	2.47 KG	G	36.3	G	36.3	G	36.7	G	36.6	G	36.3	G	36.6
417	PADMAVATHY	20	NCM	G2P1L1	ANEMIA	20/4/13	NVD	M	41 WEEKS 1 DAY	8/10	9/10	3.25 KG	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
418	AISHWARYA	20	NCM	PRIMI	NIL	20/4/13	NVD	F	41 WEEKS 1 DAY	7/10	9/10	2.6 KG	G	36.2	G	36.5	G	36.4	G	36.8	G	36.8	G	36.4
419	KANCHANA	30	NCM	PRIMI	NIL	21/4/13	NVD	M	37 WEEKS 1 DAY	6/10	9/10	1.98 KG	B	35.4	G	35.8	G	36.6	B	35.3	G	36.6	G	36.6
420	DIVYA	22	NCM	PRIMI	K/C/0 HYPOTHYROIDISM	21/4/13	LSCS	M	41 WEEKS 5 DAYS	7/10	9/10	3.97 KG	G	36.4	G	36.6	G	36.7	G	36.7	G	36.4	G	36.5
421	ASHWINI	20	NCM	PRIMI	NIL	22/4/13	NVD	F	40 WEEKS 5 DAYS	8/10	9/10	3.17 KG	G	36.2	G	36.2	G	36.3	G	36.6	G	36.5	G	36.6
422	NAGAVENI	21	II CM	PRIMI	NIL	22/4/13	NVD	M	41 WEEKS 1 DAY	8/10	9/10	3.15 KG	G	36.6	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR

MASTER CHART

423	MUNIRATHNAMA	22	NCM	PRIMI	ANEMIA	22/4/13	NVD	M	40 WEEKS 5 DAYS	8/10	9/10	2.9 KG	B	**35.3**	G	36.3	G	36.7	G	36.7	NR	NR	NR	NR
424	SUNITHA	25	NCM	G2P1L1	NIL	22/4/13	LSCS	M	37 WEEKS	7/10	8/10	2.28 KG	G	36	G	36.1	G	36.4	G	36.6	G	36.6	G	36.7
425	PRABHAVATHI	23	NCM	G2P1L1	NIL	22/4/13	NVD	F	41 WEEKS 2 DAYS	8/10	9/10	3.2 KG	B	**35.4**	G	36.5	G	36.6	NR	NR	NR	NR	NR	NR
426	NETHRA	23	NCM	G2P1L1	NIL	22/4/13	NVD	M	40 WEEKS 1 DAY	8/10	9/10	3 KG	G	36.6	G	36	G	36.5	NR	NR	NR	NR	NR	NR
427	SHILPA	24	NCM	G2P1L1	NIL	22/4/13	LSCS	M	40 WEEKS	8/10	9/10	3 KG	G	36.3	G	36.6	G	36.6	G	36.4	G	36.8	G	36.5
428	TA36.3EEYA	20	II CM	PRIMI	ANEMIA	23/4/13	NVD	F	39 WEEKS 6 DAYS	8/10	9/10	2.62 KG	G	36.6	G	36.1	G	36.7	G	36.7	G	36.6	G	36.6
429	SHILPA	24	NCM	G2P1L1	NIL	23/4/13	NVD	M	39 WEEKS 5 DAYS	8/10	9/10	2.62 KG	G	36	G	36.4	G	36.4	G	36.6	G	36.2	G	36.7
430	BHAGYAMMA	26	II CM	PRIMI	NIL	23/4/13	NVD	F	40 WEEKS 3 DAYS	8/10	9/10	2.9 KG	G	36.2	G	36.2	G	36	G	36.5	NR	NR	NR	NR
431	KUSUMA	26	NCM	PRIMI	NIL	23/4/13	LSCS	M	41 WEEKS 5 DAYS	8/10	9/10	3.5 KG	G	36.6	G	36	G	36.6	G	36.4	G	36.7	G	36.8
432	USHA	26	II CM	G2P1L1	NIL	24/4/13	NVD	M	41 WEEKS 4 DAYS	7/10	9/10	3.5 KG	G	36.4	G	36.1	G	36.8	G	36.6	G	36.8	G	36.3
433	JAYANTHI	31	NCM	G2P1L1	NIL	24/4/13	LSCS	F	41 WEEKS	7/10	9/10	3.4 KG	G	36.3	G	36.5	G	36.7	G	36.7	G	36	G	36.7
434	SUMATHI	25	NCM	G2P1L1	NIL	25/4/13	NVD	M	38 WEEKS 5 DAYS	7/10	8/10	2.65 KG	G	36.1	G	36.3	G	36.6	G		G	36.6	G	36
435	SAVITHA	32	NCM	G2P1L1	K/C/O RHD	25/4/13	NVD	M	39 WEEKS	7/10	9/10	2.3 KG	B	**35.3**	G	35.7	G	35.9	G	36.6	G	36.4	G	36.6
436	KAMAKSHI 1ST	25	II CM	G4P2L2D1	NIL	25/4/13	NVD	F	40 WEEKS 3 DAYS	7/10	9/10	2.78 KG	G	36.2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
437	KAMAKSHI 2ND	25	II CM	G4P2L2D1	NIL	25/4/13	NVD	F	40 WEEKS 3 DAYS	7/10	9/10	2.97 KG	G	36.6	G	36.1	G	36.7	G	36.7	G	36.4	G	36.2
438	SAFINA36.3	22	NCM	PRIMI	SEVERE PRE ECLAMPSIA	26/4/13	LSCS	M	41 WEEKS 2 DAYS	7/10	9/10	3.17 KG	G	36.4	G	36.6	G	36.6	G	36.2	G	36.6	G	36.5
439	LAKSHMI	22	NCM	G2P1L1	NIL	26/4/13	NVD	M	40 WEEKS 2 DAYS	8/10	9/10	2.7 KG	G	36.5	G	36	G	36	G	36.6	G	36.2	G	36.3
440	AMRAVATHI	30	NCM	G2P1L1	NIL	27/4/13	LSCS	F	40 WEEKS 1 DAY	7/10	8/10	2.5 KG	G	35.9	G	36.4	G	36.4	G	36.4	G	36.8	G	36.7
441	PRABHAVATHI	20	NCM	PRIMI	NIL	27/4/13	NVD	M	39 WEEKS 1 DAY	7/10	9/10	2.25 KG	G	35.8	G	36.2	G	36.3	G	36.7	G	36.7	G	36.4
442	SAFINE36.3	22	NCM	PRIMI	SEVERE PRE ECLAMPSIA	27/4/13	LSCS	M	40 WEEKS 5 DAYS	6/10	9/10	3.17 KG	G	36	G	36.1	G	36.7	G	36.6	G	36.6	G	36.6
443	INDUMATHI	35	NCM	G2P1L1	NIL	27/4/13	NVD	F	37 WEEKS	7/10	9/10	2.1 KG	B	**35.2**	G	36.5	G	36.6	B	35.4	G	36.5	G	36.7
444	LAKSHMI	20	NCM	PRIMI	NIL	27/4/13	NVD	F	40 WEEKS 4 DAYS	8/10	9/10	2.72 KG	G	36.2	G	36.3	NR	NR	NR	NR	NR	NR	NR	NR
445	ANJAMMA	32	II CM	G4P3L2D1	NIL	27/4/13	LSCS	M	40 WEEKS 3 DAYS	8/10	9/10	2.62 KG	G	36	G	36.7	G	36.4	G	36.5	G	36.4	G	36.8
446	NAGAMANI	20	NCM	PRIMI	NIL	27/4/13	NVD	F	41 WEEKS 2 DAYS	8/10	9/10	3.12 KG	G	36.6	G	36.1	G	36.6	G	36.1	G	36.6	G	36.1
447	AMBIKA	21	NCM	PRIMI	NIL	27/4/13	NVD	F	39 WEEKS 1 DAY	8/10	9/10	2.6 KG	G	36.3	G	35.8	G	35.8	G	36.6	G	35.9	G	36.3

MASTER CHART

	Name	Age		Parity	Risk	Date	Mode	Sex	Gestation			Weight												
448	SHYAMALA	19	NCM	PRIMI	NIL	28/4/13	NVD	M	40 WEEKS 1 DAY	8/10	9/10	2.49 KG	G	35.9	G	36.6	G	36.8	G	36.4	G	36.2	G	36.5
449	SAVITHA	26	NCM	PRIMI	NIL	28/4/13	NVD	M	41 WEEKS 1 DAY	8/10	9/10	3.12 KG	G	36.3	G	36.5	G	36.6	G	36.7	G	36.6	G	36.7
450	PAVITHRA	24	II CM	PRIMI	NIL	28/4/13	NVD	F	40 WEEKS 5 DAYS	8/10	9/10	2.79 KG	**B**	**35.4**	G	36.2	G	36.7	G	36.3	G	36.8	G	36.3
451	MAMATHA	20	NCM	PRIMI	NIL	28/4/13	NVD	M	39 WEEKS 5 DAYS	8/10	9/10	2.6 KG	G	36	G	36.4	G	36.6	G	36.7	G	36.7	G	36.6
452	KAMAKSHI	24	II CM	G2P1L1	NIL	28/4/13	LSCS	F	37 WEEKS 5 DAYS	8/10	9/10	2.3 KG	**B**	**35.3**	G	36	G	35.8	G	36.6	G	36.6	G	36.6
453	HEMA KOUSER	22	NCM	PRIMI	NIL	28/4/13	NVD	M	41 WEEKS 5 DAYS	7/10	9/10	3.1 KG	G	36.1	G	36.1	G	36	G	35.9	G	36	G	36.5
454	SHILPA	25	II CM	G3P2L1D1	ANEMIA	29/4/13	NVD	M	41 WEEKS 3 DAYS	6/10	8/10	3.2 KG	G	36.4	G	35.7	NR	NR	NR	NR	NR	NR	NR	NR
455	SOWMYA	22	NCM	G2A1	NIL	29/4/13	NVD	F	39 WEEKS 2 DAYS	8/10	9/10	2.32 KG	G	36.3	G	36.5	G	36.6	G	36.7	G	36.2	G	35.9
456	GIRIJA	20	NCM	G2A1	NIL	29/4/13	NVD	M	37 WEEKS 6 DAYS	6/10	9/10	1.96 KG	**B**	**35.3**	G	36.4	G	36.6	**B**	**35.4**	G	36.3	G	36.7
457	SUVARNA	19	NCM	G2P1L1	NIL	30/4/13	NVD	F	40 WEEKS 3 DAYS	8/10	9/10	2.6 KG	G	36.3	G	36.3	G	36.4	G	36.6	G	36.8	G	36.8
458	SWETHA	22	II CM	G2P1L1	NIL	30/4/13	NVD	M	41 WEEKS 4 DAYS	8/10	9/10	3.6 KG	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
459	SHOBA	22	NCM	G2P1L1	NIL	30/4/13	LSCS	M	39 WEEKS 3 DAYS	8/10	9/10	2.3 KG	G	35.9	**B**	**35.3**	G	36.5	G	36.5	G	36.4	G	36.6
460	KHANUR SULTANA	25	II CM	G2P1L1	NIL	30/4/13	LSCS	F	41 WEEKS 1 DAY	7/10	9/10	3.62 KG	G	36.6	G	36.1	G	36.7	G	36.4	G	36.6	G	36.7
461	ANJAMMA	20	II CM	G2P1D1	ANEMIA	1/5 13	NVD	F	37 WEEKS	8/10	9/10	1.96 KG	**B**	**35.3**	G	36.6	**B**	**35.4**	G	36.6	G	36.3	G	36
462	SARASWATHAMMA	35	NCM	G3P2L2	NIL	1/5/2013	NVD	M	38 WEEKS	8/10	9/10	1.95 KG	**B**	**35.2**	**B**	**35.3**	G	36.6	**B**	**35.4**	G	36.5	G	36.3
463	ARUNA	19	NCM	PRIMI	NIL	2/5/2013	NVD	F	40 WEEKS 1 DAY	8/10	9/10	2.7 KG	G	36.3	G	36.6	NR	NR	NR	NR	NR	NR	NR	NR
464	SARASWATHI	22	NCM	PRIMI	NIL	2/5/2013	LSCS	M	40 WEEKS 5 DAYS	8/10	9/10	2.86 KG	**B**	**35.4**	G	36.4	G	36.2	G	36.7	G	36.8	G	36.7
465	SOWMYA	19	II CM	PRIMI	NIL	2/5/2013	NVD	M	36 WEEKS 5 DAYS	7/10	8/10	1.98 KG	G	35.7	**B**	**35.3**	G	36.3	G	36.6	G	36.6	G	36.4
466	MEHAR TAJ	22	NCM	G2A1	ANEMIA	3/5/2013	NVD	F	38 WEEKS 1 DAY	7/10	8/10	1.98 KG	**B**	**35.2**	**G ***	**35.4 ***	G	36.4	G	36.6	G	36.4	G	36.6
467	PREMA	25	NCM	PRIMI	NIL	3/5/2013	NVD	M	38 WEEKS 4 DAYS	7/10	8/10	2.1 KG	**B**	**35.3**	G	36.5	G	36.7	**B**	**35.4**	G	36.7	G	36.5
468	SUSHEELA	25	NCM	G2P1L1	ANEMIA	4/5/2013	NVD	M	39 WEEKS 1 DAY	8/10	9/10	2.4 KG	G	36	G	36.1	G	36.6	G	36.7	G	36.5	G	36.7
469	BHARATHI	26	II CM	G3P2L2	NIL	5/5/2013	LSCS	F	37 WEEKS 5 DAYS	7/10	9/10	2.1 KG	**B**	**35.2**	**B**	**35.3**	G	35.9	G	36.8	G	36.6	G	36
470	YAMEEN	19	II CM	PRIMI	NIL	5/5/2013	LSCS	M	40 WEEKS 5 DAYS	8/10	9/10	3.12 KG	G	36.4	G	36.2	G	36.8	G	36.6	G	36.8	G	36.3
471	KOUSER SULTANA	22	NCM	PRIMI	SEVERE PRE ECLAMPSIA	6/5/2013	NVD	F	40 WEEKS 5 DAYS	8/10	9/10	3.1 KG	G	36.6	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR

MASTER CHART

472	CHANDRAKALA	22	II CM	PRIMI	NIL	6/5/2013	NVD	F	41 WEEKS 2 DAYS	7/10	8/10	2.8 KG	G	36.2	G	36.5	G	36.4	G	36.4	G	36.7	G	36.2
473	SHANA36.3 KHANU	26	II CM	G3P2L2	NIL	6/5/2013	LSCS	F	40 WEEKS 3 DAYS	7/10	8/10	3 KG	G	36.4	G	36.1	G	36.7	G	36.8	G	36.3	G	36.7
474	ARUNA	22	NCM	PRIMI	NIL	7/5/2013	NVD	M	39 WEEKS 3 DAYS	8/10	9/10	2.72 KG	G	36.3	G	36.6	G	36.8	G	36.7	G	36.2	G	36.3
475	GIRIJA	25	NCM	PRIMI	NIL	7/5/2013	LSCS	M	39 WEEKS	7/10	8/10	2.72 KG	G	36.2	G	36	G	36.6	G	36	G	36.6	G	36.7
476	MEENAKSHI	24	NCM	G2P1L1	ANEMIA	7/5/2013	NVD	F	41 WEEKS 2 DAYS	7/10	9/10	3.42 KG	G	36.6	G	36.3	G	36.1	G	36.6	G	36.7	G	36.5
477	SHYLAJA	22	II CM	G2P1L1	NIL	8/5/2013	NVD	M	40 WEEKS 5 DAYS	8/10	9/10	2.9 KG	G	36.2	B	35.4	NR	NR	NR	NR	NR	NR	NR	NR
478	PRABHAVATHI	32	NCM	G3P2L2	NIL	9/5/2013	NVD	M	41 WEEKS 5 DAYS	8/10	9/10	3.56 KG	G	36.6	G	36.5	G	36.5	G	36.6	G	36.5	G	36.6
479	NISHA DEVI	23	II CM	PRIMI	NIL	10/5/13	NVD	M	39 WEEKS 1 DAY	8/10	9/10	2.46 KG	G	36.2	G	36.4	G	36.7	NR	NR	NR	NR	NR	NR
480	SANDHYA	24	NCM	G3P2L1A1	NIL	10/5/13	LSCS	F	41 WEEKS 2 DAYS	7/10	9/10	3.26 KG	G	36.6	G	36.2	G	36.6	G	36.4	G	36.4	G	36.5
481	NIRMALA	22	NCM	G2P1L1	NIL	10/5/13	NVD	F	38 WEEKS 5 DAYS	7/10	9/10	2.2 KG	B	35.3	G	36.5	G	36.6	G	36.6	G	36.2	G	36.3
482	PADMAVATHY	25	NCM	G2P1L1	NIL	11/5/13	NVD	M	36 WEEKS 5 DAYS	6/10	8/10	1.94 KG	B	35.3	G	36.1	B	35.2	G	36.1	G	36.6	G	36
483	SUMALATHA	28	NCM	PRIMI	NIL	11/5/13	LSCS	M	41 WEEKS 3 DAYS	7/10	8/10	3.6 KG	G	36.6	G	36.4	G	36.4	G	36.7	G	36.4	G	36.7
484	VINODHAMA	30	NCM	G3P1L1A1	NIL	11/5/13	NVD	F	39 WEEKS	7/10	9/10	2.34 KG	G	36	G	36.6	G	36.6	G	36.6	G	36.7	G	36.4
485	LEELAMA	22	NCM	PRIMI	NIL	11/5/13	NVD	M	37 WEEKS	7/10	8/10	2.05 KG	G	35.9	G	35.9	G	36.7	G	36.5	G	36.1	G	36.6
486	MANJULA	20	NCM	PRIMI	NIL	13/5/13	NVD	M	40 WEEKS 1 DAY	6/10	8/10	2.8 KG	G	36	G	36.3	NR	NR	NR	NR	NR	NR	NR	NR
487	EMAYAVALLI	22	II CM	G2A1	SEVERE PRE ECLAMPSIA	13/5/13	NVD	F	38 WEEKS	7/10	8/10	2.14 KG	G	35.9	G	36.2	G	36	G	36.6	G	36.6	G	36.8
488	VEENA	23	NCM	PRIMI	NIL	13/5/13	LSCS	M	41 WEEKS 5 DAYS	7/10	9/10	3.25 KG	G	36.6	G	36.5	G	36.6	G	36.7	G	36.4	G	36.1
489	SHOBA	22	NCM	G2P1L1	NIL	13/5/13	LSCS	F	41 WEEKS	7/10	8/10	3.3 KG	G	36.4	G	36.1	G	36.1	G	36	G	36.5	G	36.3
490	RADHAMA	25	II CM	G4P3L2D1	NIL	14/5/13	LSCS	M	42 WEEKS	6/10	8/10	3.45 KG	G	36.4	G	36.6	G	36.4	G	36.6	G	36.7	G	36.7
491	GEETHA	20	NCM	PRIMI	NIL	14/5/13	NVD	M	39 WEEKS 6 DAYS	8/10	9/10	2.8 KG	G	36.6	G	36.4	G	36.8	G	36.2	G	36.4	G	36.8
492	MUBEEN TAJ	25	NCM	G2P1L1	NIL	14/5/13	LSCS	F	41 WEEKS 3 DAYS	7/10	8/10	3.18 KG	G	36.3	G	36.1	G	36.7	G	36.7	G	36.2	G	36.5
493	MAHALAKSHMI	20	NCM	PRIMI	NIL	14/5/13	LSCS	M	39 WEEKS	7/10	9/10	2.05 KG	B	35.4	G	36.6	G	36.5	G	36.4	G	36.6	G	36.6
494	SUMITHRA	26	NCM	PRIMI	NIL	15/5/13	NVD	M	40 WEEKS 4 DAYS	7/10	9/10	3 KG	G	36	G	36.3	NR	NR	NR	NR	NR	NR	NR	NR
495	ASHA	22	NCM	PRIMI	NIL	15/5/13	NVD	F	39 WEEKS 4 DAYS	8/10	9/10	2.8 KG	G	36.1	G	36.6	G	36.6	G	36.6	G	36.4	G	36.5
496	AYESHA	20	NCM	PRIMI	SEVERE PRE ECLAMPSIA	15/5/13	NVD	M	41 WEEKS 2 DAYS	8/10	9/10	3.13 KG	G	36.2	G	36.4	NR	NR	NR	NR	NR	NR	NR	NR
497	NALINI	22	NCM	G3P1L1A1	NIL	15/5/13	NVD	M	40 WEEKS 1 DAY	6/10	9/10	2.59 KG	G	36.5	G	36.1	G	36.4	G	36.7	G	36.6	G	36.8

MASTER CHART

498	PUSHPALATHA	28	NCM	G2A1	NIL	16/5/13	LSCS	F	38 WEEKS 3 DAYS	7/10	8/10	2.25 KG	G	36	G	36.6	G	36.7	G	36.6	G	36.7	G	36.7
499	GAYATHRI	20	NCM	G2A1	NIL	17/5/13	NVD	M	40 WEEKS 5 DAYS	8/10	9/10	2.8 KG	G	36.2	G	36.1	G	36.6	NR	NR	NR	NR	NR	NR
500	RUKSAR TAJ	18	II CM	PRIMI	NIL	17/5/13	NVD	M	41 WEEKS 4 DAYS	8/10	9/10	3 KG	G	36.6	G	36.3	G	36.7	NR	NR	G	36.6	G	36.6