

V. Krishnakumar vs State Of Tamil Nadu &Ors.; on 1 July, 2015

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Bench: S.A. Bobde, Jagdish Singh Khehar

REPORTABLE

IN THE SUPREME COURT OF INDIA

CIVIL APPELLATE JURISDICTION

CIVIL APPEAL No. 8065 OF 2009

V. KRISHNAKUMAR

.. APPELLANT

VERSUS

STATE OF TAMIL NADU & ORS.

..RESPONDENTS

With

CIVIL APPEAL No. 5402 OF 2010

1 JUDGMENT

S. A. BOBDE, J.

These two Civil Appeals are preferred against the judgment of National Consumer Disputes Redressal Commission (hereinafter referred to as the 'NCDRC') rendering a finding of medical negligence against the State of Tamil Nadu, its Government Hospital and two Government Doctors and awarding a sum of Rs.5,00,000/- to V. Krishnakumar. Civil Appeal No. 8065 of 2009 is preferred by V. Krishnakumar for enhancement of the amount of compensation. Civil Appeal No. 5402 of 2010 is preferred by the State of Tamil Nadu and another against the judgment of the NCDRC. As facts of both the appeals are same, we are disposing the appeals by this common judgment.

2. On 30.8.1996, the appellant V. Krishankumar's wife Laxmi was admitted in Government Hospital for Women and Children, Egmore, Chennai (hereinafter referred to as the "Hospital"). Against the normal gestation period of 38 to 40 weeks, she delivered a premature female baby in the 29th week of pregnancy. The baby weighed only 1250 grams at birth. The infant was placed in an incubator in intensive care unit for about 25 days. The mother and the baby were discharged on 23.9.1996. A fact which is relevant to the issue is, that the baby was administered 90-100% oxygen at the time of birth and underwent blood exchange transfusion a week after birth. The baby had apneic spells during the first 10 days of her life. She was under

the care of Respondent No.3 - Dr. S.Gopaul, Neo-paediatrician and Chief of Neo Natology Unit of the Hospital and Respondent No.4 - Dr. Duraiswamy of the Neo Natology Unit of the Hospital. The Respondent No.2 is the Director of the Hospital, which is established and run by the Respondent No.1 – State of Tamil Nadu under the Department of Health.

3. The baby and the mother visited the hospital on 30.10.1996 at the chronological age of 9 weeks. Follow up treatment was administered at the home of the appellant by Respondent No.4, the Government Doctor, Dr. Duraiswamy during home visits. The baby was under his care from 4 weeks to 13 weeks of chronological age. Apparently, the only advice given by Respondent No.4 was to keep the baby isolated and confined to the four walls of the sterile room so that she could be protected from infection. What was completely overlooked was a well known medical phenomenon that a premature baby who has been administered supplemental oxygen and has been given blood transfusion is prone to a higher risk of a disease known as the Retinopathy of Prematurity (hereinafter referred to as 'ROP'), which, in the usual course of advancement makes a child blind. The Respondent No.3, who was also a Government Doctor, checked up the baby at his private clinic at Purassaiwakkam, Chennai when the baby was 14-15 weeks of chronological age also did not suggest a check up for ROP.

4. One thing is clear about the disease, and this was not contested by the learned counsel for the respondents, that the disease occurs in infants who are prematurely born and who have been administered oxygen and blood transfusion upon birth and further, that if detected early enough, it can be prevented. It is said that prematurity is one of the most common causes of blindness and is caused by an initial constriction and then rapid growth of blood vessels in the retina. When the blood vessels leak, they cause scarring. These scars can later shrink and pull on the retina, sometimes detaching it. The disease advances in severity through five stages - 1, 2, 3, 4 and 5 (5 being terminal stage). Medical literature suggests that stage 3 can be treated by Laser or Cryotherapy treatment in order to eliminate the abnormal vessels. Even in stage 4, in some cases, the central retina or macula remains intact thereby keeping intact the central vision. When the disease is allowed to progress to stage 5, there is a total detachment and the retina becomes funnel shaped leading to blindness. There is ample medical literature on the subject. It is, however, not necessary to refer all of it. Some material relevant to the need for check up for ROP for an infant is:

“All infants with a birth weight less than 1500 gms or gestational age less than 32 weeks are required to be screened for ROP.”[1] Applying either parameter, whether

weight or gestational age, the child ought to have been screened. As stated earlier, the child was 1250 gms at birth and born after 29 weeks of pregnancy, thus making her a high risk candidate for ROP.

5. It is undisputed that the relationship of birth weight and gestational age to ROP as reproduced in NCDRC's order is as follows:

“Most ROP is seen in very low-birth weight infants, and the incidence is inversely related to birth weight and gestational age. About 70-80% of infants with birth weight less than 1000 gms show acute changes, whereas above 1500 gms birth weight the frequency falls to less than 10%.”

6. Again, it seems that the child in question was clearly not in the category where the frequency was less than 10% since the baby was below 1500 gms. In fact, it is observed by the NCDRC in its order that the discipline of medicine reveals that all infants who had undergone less than 29 weeks of gestation or weigh less than 1300 gms should be examined regardless of whether they have been administered oxygen or not. It is further observed that ROP is a visually devastating disease that often can be treated successfully if it is diagnosed in time.

7. The need for a medical check up for the infant in question was not seriously disputed by the respondents.

8. The main defence of the respondents to the complaint of negligence against the appellant's claim for compensation was that at the time of delivery and management, no deformities were manifested and the complainant was given proper advice, which was not followed. It was argued on behalf of the respondent that they had taken sufficient precautions, even against ROP by mentioning in the discharge summary as follows:

“Mother confident; Informed about alarm signs; 1) to continue breast feeding 2) To attend post natal O.P. on Tuesday.”

9. It must, however, be noted that the discharge summary shows that the above writing was in the nature of a scrawl in the corner of the discharge summary and we are in agreement with the finding of the NCDRC that the said remarks are only a hastily written general warning and nothing more. After a stay of 25 days in the hospital, it was for the hospital to give a clear indication as to what was to be done regarding all possible dangers which a baby in these circumstances faces. It is obvious that it did not occur to the respondents to advise the appellant that the baby is required to be seen by a paediatric ophthalmologist since there was a possibility of occurrence of ROP to avert permanent blindness. This discharge summary neither discloses a warning to the infant's parents that the infant might develop ROP against which certain precautions must be taken, nor any signs that the Doctors were themselves cautious of the dangers of development of ROP. We are not prepared to infer from ‘Informed about alarms signs’ that the parents were cautioned about ROP in this case. We find it unfortunate that the respondents at one stage took a stand that the appellant did not follow up properly by not attending on a Tuesday but claiming that the mother attended on a

Wednesday and even contesting the fact that she attended on a Wednesday. It appears like a desperate attempt to cover up the gross negligence in not examining the child for the onset of ROP, which is a standard precaution for a well known condition in such a case. In fact, it is not disputed that the Respondent No.3 attended to and examined the baby at his private clinic when the baby was 14-15 weeks and even then did not take any step to investigate into the onset of ROP. The Respondent No.4 also visited the appellant to check up the baby at the home of the appellant and there are prescriptions issued by the said Respondent No.4, which suggests that the baby was indeed under his care from 4 weeks to 13 weeks.

10. The NCDRC has relied on the report dated 21.8.2007 of the All India Institute of Medical Sciences, New Delhi (hereinafter referred to as 'AIIMS'). In pursuance of the order of the NCDRC, a medical board was constituted by AIIMS consisting of five members, of which, four are ophthalmological specialists. The board has given the following opinion:-

"A premature infant is not born with Retinopathy of Prematurity (ROP), the retina though immature is normal for this age. The ROP usually starts developing 2-4 weeks after birth when it is mandatory to do the first screening of the child. The current guidelines are to examine and screen the babies with birth weight <1500g and <32 weeks gestational age, starting at 31 weeks post-conceptual age (PAC) or 4 weeks after birth whichever is later. Around a decade ago, the guidelines in general were the same and the premature babies were first examined at 31-33 weeks post-conceptual age or 2-6 weeks after birth.

There is a general agreement on these above guidelines on a national and international level. The attached annexure explains some authoritative resources and guidelines published in national and international literature especially over the last decade.

However, in spite of ongoing interest world over in screening and management of ROP and advancing knowledge, it may not be possible to exactly predict which premature baby will develop ROP and to what extent and why."

Review of literature of ROP screening guidelines One thing this report reveals clearly and that is that in the present case the onset of ROP was reasonably foreseeable. We say this because it is well known that if a particular danger could not reasonably have been anticipated it cannot be said that a person has acted negligently, because a reasonable man does not take precautions against unforeseeable circumstances. Though it was fairly suggested to the contrary on behalf of the respondents, there is nothing to indicate that the disease of ROP and its occurrence was not known to the medical profession in the year 1996. This is important because whether the consequences were foreseeable or not must be measured with reference to knowledge at the date of the alleged negligence, not with hindsight. We are thus satisfied that we are not looking at the 1996 accident with 2007 spectacles.[2]

11. It is obvious from the report that ROP starts developing 2 to 4 weeks after birth when it is mandatory to do the first screening of the child. The baby in question was admitted for a period of 25 days and there was no reason why the mandatory screening, which is an accepted practice, was not done. The report of the AIIMS (supra) states that 'it may not be possible to exactly predict which premature baby will develop ROP and to what extent and why'. This in our view underscores the need for a check up in all such cases. In fact, the screening was never done. There is no evidence whatsoever to suggest to the contrary. It appears from the evidence that the ROP was discovered when the appellant went to Mumbai for a personal matter and took his daughter to a paediatrician, Dr. Rajiv Khamdar for giving DPT shots when she was 4½ months. That Doctor, suspected ROP on an examination with naked eye even without knowing the baby's history. But, obviously Respondent Nos.3 and 4 the Doctors entrusted with the care of the child did not detect any such thing at any time. The helpless parents, after detection got the baby's eyes checked by having the baby examined by several doctors at several places. Traumatized and shocked, they rushed to Puttaparthi for the blessings of Shri Satya Sai Baba and the baby was anesthetically examined by Dr. Deepak Khosla, Consultant, Department of Ophthalmology at Baba Super Specialty Hospital at Puttaparthi. Dr. Khosla did not take up the case since the ROP had reached stage 5. After coming back from Puttaparthi, the baby was examined by Dr. Tarun Sharma alongwith the retinal team of Shankar Netralaya, who were also of the same opinion. The parents apparently took the baby to Dr. Namperumal Swamy of Arvind Hospital, Madurai, who advised against surgery, stating that the baby's condition was unfavourable for surgery. The appellant then learnt of Dr. Michael Tresse, a renowned expert in Retinopathy treatment for babies in the United States. He obtained a reference from Dr. Badrinath, chief of Shankar Netralaya and took his only child to the United States hoping for some ray of light. The appellant incurred enormous expenses for surgery in the United States but to no avail.

12. Having given our anxious consideration to the matter, we find that no fault can be found with the findings of the NCDRC which has given an unequivocal finding that at no stage, the appellant was warned or told about the possibility of occurrence of ROP by the respondents even though it was their duty to do so. Neither did they explain anywhere in their affidavit that they warned of the possibility of the occurrence of ROP knowing fully well that the chances of such occurrence existed and that this constituted a gross deficiency in service, nor did they refer to a paediatric ophthalmologist. Further it may be noted that Respondent Nos. 3 & 4 have not appealed to this Court against the judgment of the NCDRC and have thus accepted the finding of medical negligence against them. Deficiency in Service

13. In the circumstances, we agree with the findings of the NCDRC that the respondents were negligent in their duty and were deficient in their services in not screening the child between 2 to 4 weeks after birth when it is mandatory to do so and especially since the child was under their care. Thus, the negligence began under the supervision of the Hospital i.e. Respondent No.2. The Respondent Nos. 3 and 4, who checked the baby at his private clinic and at the appellant's home, respectively, were also negligent in not advising screening for ROP. It is pertinent to note that Respondent Nos. 3 and 4 carried on their own private practice while being in the employment of Respondent No. 2, which was a violation of their terms of service.

Compensation

14. The next question that falls for consideration is the compensation which the respondents are liable to pay for their negligence and deficiency in service. The child called Sharanya has been rendered blind for life. The darkness in her life can never be really compensated for in money terms. Blindness can have terrible consequences. Though, Sharanya may have parents now, there is no doubt that she will not have that protection and care forever. The family belongs to the middle class and it is necessary for the father to attend to his work. Undoubtedly, the mother would not be able to take Sharanya out everywhere and is bound to leave the child alone for reasonable spells of time. During this time, it is obvious that she would require help and maybe later on in life she would have to totally rely on such help. It is therefore difficult to imagine unhindered marriage prospects or even a regular career which she may have otherwise pursued with ease. She may also face great difficulties in getting education. The parents have already incurred heavy expenditure on the treatment of Sharanya to no avail. It is, thus, obvious that there should be adequate compensation for the expenses already incurred, the pain and suffering, lost wages and the future care that would be necessary while accounting for inflationary trends.

15. There is no doubt that in the future Sharanya would require further medical attention and would have to incur costs on medicines and possible surgery. It can be reasonably said that the blindness has put Sharanya at a great disadvantage in her pursuit for making a good living to care for herself.

16. At the outset, it may be noted that in such cases, this court has ruled out the computation of compensation according to the multiplier method. (See *Balram Prasad vs. Kunal Saha*, (2014) 1 SCC 384 and *Nizam's Institute of Medical Sciences vs. Prashant S. Dhananka and Others*, (2009) 6 SCC 1.

The court rightly warned against the straightjacket approach of using the multiplier method for calculating damages in medical negligence cases. Quantification of Compensation

17. The principle of awarding compensation that can be safely relied on is *restitutio in integrum*. This principle has been recognized and relied on in *Malay Kumar Ganguly vs. Sukumar Mukherjee*, (2009) 9 SCC 221 and in *Balram Prasad's case* (supra), in the following passage from the latter:

“170. Indisputably, grant of compensation involving an accident is within the realm of law of torts. It is based on the principle of *restitutio in integrum*. The said principle provides that a person entitled to damages should, as nearly as possible, get that sum of money which would put him in the same position as he would have been if he had not sustained the wrong. (See *Livingstone v. Rawyards Coal Co.*).” An application of this principle is that the aggrieved person should get that sum of money, which would put him in the same position if he had not sustained the wrong. It must necessarily result in compensating the aggrieved person for the financial loss suffered due to the event, the pain and suffering undergone and the liability that he/she would have to incur due to the disability caused by the event.

Past Medical Expenses

18. It is, therefore, necessary to consider the loss which Sharanya and her parents had to suffer and also to make a suitable provision for Sharanya's future.

19. The appellant - V. Krishnakumar, Sharanya's father is the sole earning member of a middle class family. His wife is said to be a qualified accountant, who had to sacrifice her career to attend to the constant needs of Sharanya. Sharanya's treatment and the litigation that ensued for almost two decades has been very burdensome on account of the prolonged physical, mental and financial hardships, which her parents had to undergo. It appears that the total expenditure incurred by the appellant from the date of the final verdict of the NCDRC (27.5.2009) until December, 2013 is Rs.8,13,240/-. The aforesaid amount is taken from the uncontroverted statement of expenditure submitted by the appellant. The appellant has stated that he had incurred the following expenditure for Sharanya's treatment, for which there is no effective counter, till December, 2013:

Medical Expenses	Amount	Supporting Document	a)Till December	28,63,771/-
Exhibit P1-P4	2003	b)January 2004-	2,57,600/-	Annexure A-8
October	2007	c)27.5.2009 to	8,13,240/-	I.A. No.2 of 2014 in
December 2013	Civil	Appeal No. 8065 of	2009	d)January 2014 –
2,03,310/-	Based on I.A. No.2 of	March 2015	2014 in Civil Appeal No.	8065 of 2009
Total	41,37,921/-	(a)+(b)+(c)+(d)		

20. Since there is no reason to assume that there has been any change in the expenditure, we have calculated the expenditure from January 2014 to March 2015 at the same rate as the preceding period. In addition, we also deem it fit to award a sum of Rs. 1,50,000/- in lieu of the financial hardship undergone particularly by Sharanya's mother, who became her primary caregiver and was thus prevented from pursuing her own career. In *Spring Meadows Hospital and Another v. Harjol Ahluwalia* [1998 4 SCC 39] this court acknowledged the importance of granting compensation to the parents of a victim of medical negligence in lieu of their acute mental agony and the lifelong care and attention they would have to give to the child. This being so, the financial hardship faced by the parents, in terms of lost wages and time must also be recognized. Thus, the above expenditure must be allowed.

21. We accordingly direct that the above amount i.e. Rs.42,87,921/- shall be paid by the Respondent Nos.1 to 4. In addition, interest at the rate of 6% p.a. shall be paid to the appellant from the date of filing of the petition before the NCDRC till the date of payment.

Future Medical Expenses

22. Going by the uncontroverted statement of expenditure for the period from the final verdict of the NCDRC to December, 2013, the monthly expenditure is stated to be Rs. 13,554/-, resulting in an annual expenditure of Rs. 1,62,648/-. Having perused the various heads of expenditure very carefully, we observe that the medical costs for Sharanya's treatment will not remain static, but are likely to rise substantially in the future years. Sharanya's present age is about 18 ½ years. If her life

expectancy is taken to be about 70 years, for the next 51 years, the amount of expenditure, at the same rate will work out to Rs. 82,95,048/-. It is therefore imperative that we account for inflation to ensure that the present value of compensation awarded for future medical costs is not unduly diluted, for no fault of the victim of negligence. The impact of inflation affects us all. The value of today's rupee should be determined in the future. For instance, a sum of Rs. 100 today, in fifteen years, given a modest 3% inflation rate, would be worth only Rs.64.13. In *Wells v. Wells*[3] the House of Lords observed that the purpose of awarding a lump sum for damages for the costs of future care and loss of future earnings was to put the plaintiff in the same financial position as if the injury had not occurred, and consequently the courts had the difficult task of ensuring that the award maintained its value in real terms, despite the effect of inflation.

Apportioning For Inflation

23. Inflation over time certainly erodes the value of money. The rate of inflation (Wholesale Price Index-Annual Variation) in India presently is 2 percent[4] as per the Reserve Bank of India. The average inflationary rate between 1990-91 and 2014-15 is 6.76 percent as per data from the RBI. In the present case we are of the view that this inflationary principle must be adopted at a conservative rate of 1 percent per annum to keep in mind fluctuations over the next 51 years.

The formula to compute the required future amount is calculated using the standard future value formula:-

$$FV = PV \times (1+r)^n$$
 PV = Present Value r = rate of return n = time period Accordingly, the amount arrived at with an annual inflation rate of 1 percent over 51 years is Rs.1,37,78,722.90 rounded to Rs.1,38,00,000/-. Comparative law

24. This Court has referred to case law from a number of other major common law jurisdictions on the question of accounting for inflation in the computation of awards in medical negligence cases. It is unnecessary to discuss it in detail. It is sufficient to note that the principle of apportioning for inflationary fluctuations in the final lump sum award for damages has been upheld and applied in numerous cases pertaining to medical negligence. In the United States of America, most states, as in Ireland and the United Kingdom, require awards for future medical costs to be reduced to their present value so that the damages can be awarded in the form of a one-time lump sum. The leading case in the United States, which acknowledges the impact of inflation while calculating damages for medical negligence was *Jones & Laughlin Steel Corporation v. Pfeifer*[5], wherein that court recognized the propriety of taking into account the factors of present value and inflation in damage awards. Similarly, in *O'Shea v Riverway Towing Co.*[6], Posner J., acknowledged the problem of personal injury victims being severely undercompensated as a result of persistently high inflation.

In *Taylor v. O' Connor*[7], Lord Reid accepted the importance of apportioning for inflation:

“It will be observed that I have more than once taken note of present day conditions - in particular rising prices, rising remuneration and high rates of interest. I am well aware that there is a school of thought which holds that the law should refuse to have

any regard to inflation but that calculations should be based on stable prices, steady or slowly increasing rates of remuneration and low rates of interest. That must, I think, be based either on an expectation of an early return to a period of stability or on a nostalgic reluctance to recognise change. It appears to me that some people fear that inflation will get worse, some think that it will go on much as at present, some hope that it will be slowed down, but comparatively few believe that a return to the old financial stability is likely in the foreseeable future. To take any account of future inflation will no doubt cause complications and make estimates even more uncertain. No doubt we should not assume the worst but it would, I think, be quite unrealistic to refuse to take it into account at all.” In the same case Lord Morris of Borth-y-Gest also upheld the principle of taking into account future uncertainties. He observed:

“It is to be remembered that the sum which is awarded will be a once-for- all or final amount which the widow must deploy so that to the extent reasonably possible she gets the equivalent of what she has lost. A learned judge cannot be expected to prophesy as to future monetary trends or rates of interest but he need not be unmindful of matters which are common knowledge, such as the uncertainties as to future rates of interest and future levels of taxation. Taking a reasonable and realistic and common- sense view of all aspects of the matter he must try to fix a figure which is neither unfair to the recipient nor to the one who has to pay. A learned judge might well take the view that a recipient would be ill-advised if he entirely ignored all inflationary trends and if he applied the entire sum awarded to him in the purchase of an annuity which over a period of years would give him a fixed and predetermined sum without any provision which protected him against inflationary trends if they developed.” More recently the Judicial Committee of the UK Privy Council in *Simon v. Helmot*[8] has unequivocally acknowledged the principle, that the lump sum awarded in medical negligence cases should be adjusted so as to reflect the predicted rate of inflation.

25. Accordingly, we direct that the said amount i.e. Rs.1,38,00,000/- shall be paid, in the form of a Fixed Deposit, in the name of Sharanya. We are informed that the said amount would yield an approximate annual interest of Rs. 12,00,000/-.

26. We find from the impugned order of the NCDRC that the compensation awarded by that Forum is directed to be paid only by Respondent Nos. 1 and 3 i.e. the State of Tamil Nadu and Dr. S. Gopaul, Neo-pediatrician, Government Hospital for Women & Children, Egmore, Chennai. No reason has been assigned by the Forum for relieving Respondent Nos.2 and 4. Dr. Duraiswami, Neo Natology Unit, Government Hospital for Women & Children, Egmore, Chennai, who also treated Sharanya during the course of his visits to the house of the appellant.

27. It is settled law that the hospital is vicariously liable for the acts of its doctors vide *Savita Garg vs. National Heart Institute*, (2004) 8 SCC 56, also followed in *Balram Prasad's case* (supra). Similarly in *Achutrao Haribhau Khodwa v. State of Maharashtra*, (1996) 2 SCC 634 this court unequivocally held that the state would be vicariously liable for the damages which may become

payable on account of negligence of its doctors or other employees. By the same measure, it is not possible to absolve Respondent No. 1, the State of Tamil Nadu, which establishes and administers such hospitals through its Department of Health, from its liability.

Apportionment of Liability

28. In the circumstances, we consider it appropriate to apportion the liability of Rs. 1,38,00,000/- among the respondents, as follows:

Rs. 1,30,00,000/- shall be paid by Respondent Nos. 1 and 2 jointly and severally i.e. The State of Tamil Nadu and the Director, Government Hospital for Women & Children, Egmore, Chennai; and Rs. 8,00,000/- shall be paid by Respondent Nos. 3 and 4 equally i.e. Rs. 4,00,000/- by Dr. S. Gopaul, Neo- pediatrician, Government Hospital for Women & Children, Egmore, Chennai and Rs. 4,00,000/- by respondent no. 4 i.e. Dr. Duraisamy, Neo Natology Unit, Government Hospital for Women & Children, Egmore, Chennai.

The above mentioned amount of Rs. 1,38,00,000/- shall be paid by Respondent Nos. 1 to 4 within three months from the date of this Judgment otherwise the said sum would attract a penal interest at the rate of 18% p.a.

29. Further, we direct that the amount of Rs. 42,87,921/- in lieu of past medical expenses, shall be apportioned in the following manner:

a) Respondent Nos. 1 and 2 are directed to pay Rs.

40,00,000/- jointly, alongwith interest @ 6% p.a. from the date of filing before the NCDRC; and

b) Respondent Nos. 3 and 4 are directed to pay Rs.

2,87,921/- in equal proportion, alongwith interest @ 6% p.a. from the date of filing before the NCDRC.

30. In the event the Respondent Nos. 1 and 3 have made any payment in accordance with the award of the NCDRC, the same may be adjusted.

31. Accordingly, Civil Appeal No. 8065 of 2009 is allowed in the above terms and Civil Appeal No. 5402 of 2010 is dismissed. No costs.

.....J. [JAGDISH SINGH KHEHAR]J. [S.A. BOBDE] NEW DELHI, JULY 1, 2015

[1] AIIMS Report dated 21.8.2007

[2] See Roe v. Minister of Health [1954] 2 QB 66 and the discussion in

‘Medical Negligence’, Michael Jones, 4th Edition, Sweet & Maxwell, London 2008 at page 270.

- [3] [1999] 1 A.C. 345.
- [4] Handbook of Statistics, Reserve Bank of India
- [5] (1983) 462 US 523
- [6] (1982) 677 F.2d 1194, at 1199 (7th Cir)
- [7] [1971] A.C. 115
- [8] [2012] UKPC 5

Year	Source	First Screening	Who to screen
2006	American Academy of Pediatrics et al.	31 wks PCA or 4 wks after birth whichever later	<1500gms birth weight or <32 wks GA or higher
2003	Jalali S et al. Indian J Ophthalmology	31 wks PCA or 3-4 wks after birth whichever earlier	<1500g birth weight or <32 wks GA or higher
2003	Azad et al. JIMA	32 wks PCA or 4-5 wks after birth- whichever earlier	<1500g birth weight or <32 wks GA or higher

|2002 |Aggarwal R et. |32 wks PCA or |<1500 gm birth | | |Al Indian J. |4-6 wks after |weight or <32 | | |Pediatrics |birth whichever|wks GA | | | |earlier | | |1997 |American |31-33 wks PCA |<1500 gm birth | | |Academy of |or 4-6 wks |weight or <28 | | |Paediatrics et |after birth |wks GA or higher| | |al. | | |1996 |Maheshwari R et|32 wks PCA or 2|<1500 gm birth | | |al. National |wks after birth|weight or <35 | | |Med. J. India |whichever is |wks GA or 02>24 | | | |earlier |hrs | |1988 |Cryotherapy ROP|4-6 wks after |<1250 gms birth | | |Group |birth |weight |