MATERIAL AND METHOD
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The present study "EVALUATION OF MENSTRUAL AGE VERSUS RADIOLOGICAL ESTIMATION OF GESTATIONAL AGE BY PLAIN SKIAGRAMS IN THIRD TRIMESTER OF PREGNANCY" was carried out in Department of RADIO-DIAGNOSIS, Maharani Laxmi Bai Medical College & Hospital, Jhansi. A prospective study was carried out on 50 pregnant women in third trimester of pregnancy.

Following material was used in this study:
1- X-ray films of size 12" x 15"
2- Cassettes and screen
3- 800 M.A. X-ray Machine
4- Developer and fixer solutions
5- Illuminating view box
6- Measuring scale

For this study fifty cases were selected from the Antenatal Clinic of Department of Obstetrics and Gynaecology, Maharani Laxmi Bai Medical College and Hospital, Jhansi. All the women attending antenatal clinic were inquired for their menstrual history, including the date of the last menstrual period. Complications occurring
during the pregnancy, previous pregnancies, and maturity of infant in previous deliveries. In multiparous women, a detailed history of previous pregnancy, whether eventful or not, and the maturity of the infant was obtained.

The criteria for selection of cases for the study were patients with a history of regular menstrual periods, an accurate knowledge of the date of last menstrual period, and an uncomplicated pregnancy. All patients were radiographed at differing weeks of gestation, during the third trimester of pregnancy. Patients attending the antenatal clinic during their third trimester of pregnancy, first time were inquired about their last menstrual period and history of any present or past complications. Postero-anterior view of the abdomen was taken in patients found suitable. If radiological assessment indicated any doubt, as to the accuracy of the duration of menstrual cycles and pregnancy, date of last menstrual period, then such cases were excluded from the study. Majority of cases, radiographed were followed upto delivery and the maturity of the foetus was assessed.

The series does not, therefore, include any case with an uncertain date of the last menstrual period.
X-ray Technique:

All the patients were radiographed in Radiodiagnosis Department of Maharani Laxmi Bai Medical College and Hospital, Jhansi. 800 M.A. X-ray unit was used because a short exposure time was required.

The patient was asked to lie flat in prone position on the X-ray table after emptying her bladder. The prone position while awkward, can easily be maintained by most pregnant women with help of pillows underneath the chest and knee. This diminishes the patients postero-anterior diameter significantly. Though it may occasionally accentuate fetal movement, to overcome this short exposure time was used and patient was asked to take a few long deep breaths to prevent foetal anoxia before suspending respiration during the actual exposure. Film focus distance was 100 cm. X-ray beam was centered over the third lumbar vertebra of mother. 80 to 90 KVP and 120 to 160 M.A. were used depending on the patients girth. Fast screen and films were used.

The X-ray films thus obtained were immediately processed and were thoroughly examined for -

(1) Presence, if any, of overlapping of the femur, spine and knee joint with the maternal skeleton.
(2) Presence, blurring of femur, or lumbar spine, due to foetal movement.

If any of the above aberration was present, a second film was taken.

The following parameters were recorded from films selected for the study.

(1) Femur length;

The longer of the two bones was measured. The upper and lower ends of femur were marked on the film. The length between these two points was measured in straight line to the nearest millimeter.

(2) Lumbar curve length;

The upper end of the first lumbar vertebra and the lower end of the fifth lumbar vertebra were marked on the film and the distance through the middle of the vertebra was measured to the nearest millimeter by a flexible ruler bent to conform to the spinal curve.

(3) Presence or absence of distal femoral epiphyses was noted.

(4) Presence or absence of proximal tibial epiphyses was noted.

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