

WISCONSIN STILLBIRTH SERVICE PROGRAM

CLINICAL PHOTOGRAPHS OF STILLBORNS

Photographs have proven extremely helpful in supplementing [but not supplanting] the clinical examination. The higher the quality of the photographs the more helpful they will be. However, fear of poor quality shouldn't inhibit you -- blurry polaroid snapshots are better than no pictures at all! Digital photos are great and if you wish you may email them to Dr McPherson <mcpherson.elizabeth@marshfieldclinic.org>.

Photographs should include:

1. **Whole body frontal** photo including limbs (hands palm up if possible);
2. **Frontal and lateral** pictures of the face;
3. Photos of **any abnormal parts**.

X-RAY EVALUATION OF STILLBORNS

About 20% of unselected stillborns will have radiographic abnormalities. While x-rays are most critical in dwarfing conditions etc., unexpected positive findings in other infants whom we have previously evaluated suggest that all stillborns should have x-ray studies done.

Because of the number of types of machines used, and the need for individual calibration, we cannot make specific recommendations for technique. Settings appropriate for a living premature infant of comparable size should result in technically adequate films. For very small stillborns, mammography may be more effective.

Positioning and Views to be Taken:

1. Every stillborn should have one AP 'babygram'.

The infant should be positioned so that the trunk is as truly AP as possible. The head should be turned to the side (true lateral of the head). The limbs should be straightened as much as possible and, if possible, placed in the 'anatomic' position (resulting in AP views of both the arms and legs). Head and all limbs (including hands and feet) should be included.

2. Stillborns with visible limb abnormalities should have separate films should be taken of the abnormal parts. When short limbs or dwarfism are noted, films should include: : AP and lateral of all limbs, AP of the hands, lateral spine

FETAL-MATERNAL HEMORRHAGE TESTING FOR STILLBORN EVALUATION

Massive fetal maternal hemorrhage (FMH) may be the cause of around 1 in every 50 stillbirths. No antecedent historical or clinical features allow sufficient selection, so that with any selectivity a large proportion of FMH will remain undetected. Cost is modest. The information gained can be of substantial importance. Therefore, we recommend --

Stillbirth assessment should, in all instances, incorporate testing of maternal blood for evidence of massive fetal-maternal hemorrhage. Standard Kleihauer-Betke testing in any experienced laboratory is sufficient.

Blood drawing can be done pre- or postpartum at the convenience of the care provider and the mother; *only if caesarean section is anticipated is it important to draw the sample prior to delivery.*
·In those with positive tests (25% or more of estimated fetal blood volume lost), follow up testing (at a postpartum check) should be done to rule out the possibility of a false positive because of a process (e.g. sickle cell trait) in the mother which causes persistent elevation of fetal hemoglobin.

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OBTAINING & HANDLING SPECIMENS FROM STILLBORNS FOR CHROMOSOME STUDY

What sample(s) do I take? If there is any maceration, the placental sample will be the most useful. Cord blood is useful primarily for intrapartum or immediate neonatal deaths. Postmortem samples from internal tissues or skin are valuable as a backup for additional studies in the future, but are not the primary source for cytogenetic studies.

[1] PLACENTAL SAMPLE: Thaw media. Insure that the fetal side is being sampled (most easily accomplished by 'inverting' the membranes around the umbilical cord to visualize the amniotic cavity, the inner surface of which will, of course, be the fetal side). Near the insertion of the cord, peel away the membranous covering. Using clean technique (needn't be sterile but care should be taken so that bacterial overgrowth doesn't occur) cut a 1/2 centimeter square piece of placenta about 2-3 mm deep from beneath the peeled away membranes. Place entire sample in thawed media. Make sure media container is completely filled (or the sample may stick to the lid outside of the media in shipment). Seal with parafilm or tape and label. DON'T freeze; in fact it is best to leave at room temperature until shipped (see below).

[2] CORD BLOOD: 1-10 cc should be obtained in a HEPARINIZED container such as a 'green top', sodium heparin. Blood should not be frozen; it should be kept at room temperature or refrigerated until shipped (see below).

[3] POSTMORTEM SAMPLES: Thaw media. 1/2 centimeter samples taken using sterile or clean technique can include: LUNG, GONAD, FASCIA, SKIN or other samples. Place samples in thawed media (multiple samples of different tissues from the same stillborn can be placed in the same media container if necessary). Make sure media container is completely filled (or the sample may stick to the lid outside of the media in shipment). Seal with parafilm or tape and label. DON'T freeze; in fact it is best to leave at room temperature until shipped (see below).

[6] SHIPMENT OF SAMPLES FOR CHROMOSOME STUDY

Fill out the chromosome request sheet (next page).

Make sure all vials are labelled.

Pack the specimen containers and request sheet in a mailer.

If there is danger of extreme cold or extreme heat during shipment (e.g. January or July, or, frankly, almost anytime in Wisconsin), wrap a lot of tissue, gauze, etc. around the specimen for insulation.

Send by 'next day' services available in your area (e.g. Federal Express, Purolator, etc.) to:

**Cytogenetics Laboratory
Wisconsin State Laboratory of Hygiene
465 Henry Mall
Madison, WI 53706-1578**

The quicker samples arrive at the laboratory, the more likely will viable cells allow for chromosomal study. Nonetheless, if next day service is not available or is not feasible, the samples can be sent through the U.S. mail [first class].