

## CASE REPORT

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# Alleged Forgery of Sonography Report Leads to Elective Abortion of Late 23 Week-Old Fetus

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**ABSTRACT:** In this case report, a very obese young woman who claimed to be 17 gestational weeks into pregnancy, sought an elective abortion. Upon dilation and curettage, the doctor assessed the fetal remains to be nearly 26 gestational weeks. After contacting local authorities, who turned the case over to the Office of the Medical Examiner, the doctor determined that the woman had apparently forged her sonography report from the radiology clinic. She was thus able to obtain an abortion at more than 23 gestational weeks. While abortion laws vary from state to state, most doctors are reluctant to perform an abortion on a woman so far into term, since serious medical complications may arise and fetal viability must be considered. This case history may demonstrate the importance of independent confirmation of gestational age prior to such a procedure.

**KEYWORDS:** forensic science, forensic anthropology, forensic pathology, fetal remains, late abortion, abortion rates, sonography report, gestational age determination, fetal viability, diaphyseal length, diaphyseal shrinkage, foot length

Forensic specialists may encounter forensic fetal remains. While circumstances surrounding cause of death can vary, seldom does the specialist receive fetal remains obtained from legal abortions since these are disposed of by the clinic, doctor or hospital (in Arizona, pursuant to Arizona Administrative Code R9-19-310) (1). Generally, the incidence of legal abortion has steadily increased over the last several years, in many parts of the United States, including Arizona. Abortion rates dating from 1977 to 1991 show that the incidence has fluctuated from year to year, but generally increased from 11.4 to 13.4 per 1000 women aged 15–44 in the state of Arizona. National rates are double these values, increasing from 22.0 to 24.0 per 1000 in the same age group during the same time period. In Arizona, the breakdown of abortions by gestational age is as follows: 80.3% of legal abortions are conducted in the first 12 weeks of pregnancy; 5.7% between 13–20 weeks; and less than 0.1% after 20 weeks (the remaining 13.9% do not have gestational age filed) (2). Such late pregnancy abortions may lead

to many medicolegal complications, and doctors may be reluctant to perform this procedure for various reasons.

While the relevant laws vary from state to state, abortions may be performed up to 20 weeks in Arizona by filing a termination of pregnancy report with the State Registrar (Arizona Administrative Code R9-19-302) (1). In the case of a later abortion, if the fetus is deemed viable at the time of the procedure, the physician must follow provisions that promote, maintain and preserve its life; these provisions include the presence of a second physician (A.R.S. 36-2301) (3). If the fetus dies and is estimated to be older than 20 gestational weeks or weighs more than 350 g, then the cause of death will be determined by a pathologist and a death certificate will be filed with the Bureau of Vital Statistics (A.R.S. 36-329) (3).

We present the case history of a young woman who obtained an elective abortion at nearly 24 gestational weeks using an apparently forged ultrasound report. The abortus was submitted by the doctor performing the procedure to local authorities, who then released the remains to the Office of the Medical Examiner (OME) in Pima County, Arizona, where a forensic examination took place.

### Case History

In the fall of 1994, a young woman underwent a sonogram at a local radiology clinic for the purposes of obtaining an elective abortion. Based on patient self-recalled date of last menstrual period and measurements obtained during sonography, (e.g., biparietal diameter, head circumference, foot length, abdominal circumference), the clinic assigned a gestational age of 17 weeks 3 days to the fetus. The patient then hand-carried the obstetric pelvic ultrasound report from this facility to a gynecologist, who performed the abortion four days later. The physician's report described a very obese young woman who was in otherwise normal health with a family history of diabetes mellitus. Palpation of the uterus for purposes of gestational age determination was difficult due to her obesity. Upon dilation of the cervix, scraping and removal of the fetal remains, the gynecologist realized that the overall size of the body segments was much larger than expected from a 17 week 3 day fetus and thought that it corresponded well to a 26-week fetus. The physician notified local authorities who submitted the remains to OME for gestational age determination.

After these events, the gynecologist requested the patient's original sonography report from the radiology clinic, and after receiving same and comparing it to the one the patient had brought in, determined that the report belonged to another patient. Indeed, the ra-

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diology facility later supplied local police with a copy of the patient's original sonography report. On this report, it was stated that she was 19 weeks 6 days into gestation exactly one month prior to the abortion. Thus, the fetal remains have an accurate sonographic age of 23 weeks 6 days at the time of this procedure.

### Autopsy Findings

Local authorities submitted the fetal remains to OME in three dated, labeled plastic jars (Fig. 1). The contents, preserved in formalin, were itemized as follows: the first jar contained umbilical cord, placenta, parts of lung and kidney, partial and complete body segments, such as hands, antebrachial and crural segments and feet; the second jar held placenta, skin, soft tissue, skull and bone fragments; and the third jar contained lung, liver, unidentifiable soft tissue, and a collection sock.

Microscopic examination revealed chorionic villi of moderate size and no evidence of villitis. The membranes were normal, without signs of inflammation. Three vessels were present in the umbilical cord: funisitis was not observed. No toxicology was done, since the remains were preserved in formalin.

After extensive examination, it was determined that the remains represented a single fetus, with considerable soft tissue tearing and few intact body segments. As the common standard measurements for gestational age (e.g., head circumference, abdominal circumference and femoral length) could not be conducted, the remains were submitted to the forensic anthropologist at the Human Identifica-

tion Laboratory, The University of Arizona, for gestational age determination.

### Results

The fetal remains were sorted and body segments and soft tissues placed into anatomical position and photodocumented for medico-legal purposes (Fig. 2). Within these remains, antebrachial segments, hands, crural segments and feet, could be easily identified. The antebrachial and crural segments exhibit extensive lacerations. The crural segment also has hemostat marks made during the procedure (Figs. 3,4). These complete body parts could be used for gestational age determination and a penis with attached scrotum for phenotypic sex determination.

Given the dismembered nature of the remains, two methods were used to assess gestational age. Although both feet were present, only the right foot remained entirely intact and could be used for gestational age determination. Four studies were used to calculate age on this basis: Mercer et al. (4), Goldstein et al. (5), Amato et al. (6) and Kumar and Kumar (7). These studies yielded an age of 23.71–26.32 weeks.



FIG. 1—The fetal remains were submitted to the Office of the Medical Examiner in three plastic containers.



FIG. 2—The fetal remains were reapproximated for photodocumentation.



FIG. 3—The right antebrachial segment was photodocumented for associated tool marks made during the abortive procedure.

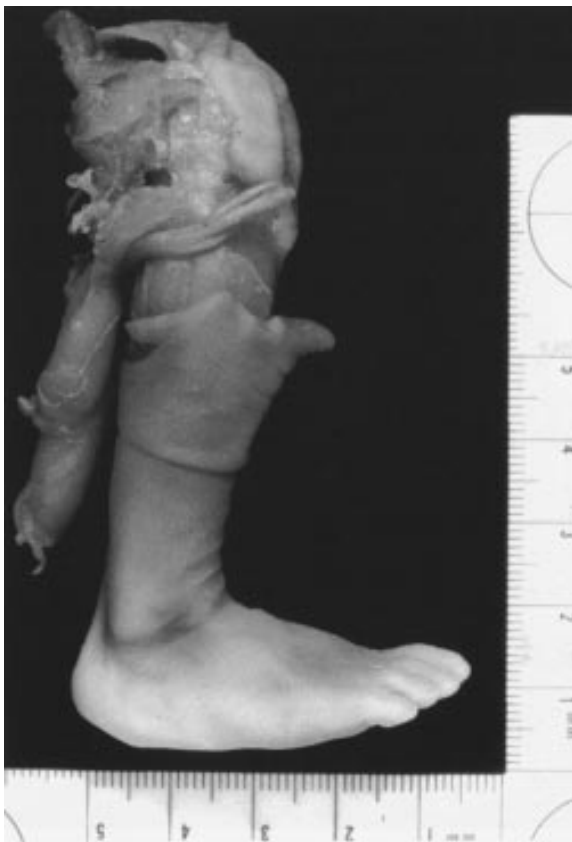


FIG. 4—The right crural segment was complete with extensive soft tissue lacerations.

In the other method, the crural and antebrachial segments were radiographed and measurements obtained from the diaphyses of the ulnae, radii, tibiae and fibulae (Figs. 5,6). Diaphyseal shrinkage rates between wet and dry bone were calculated. These adjusted values were compared to three forensic fetal studies—Olivier and Pineau (8,9), Fazekas and Kósa (10) and Weaver (11)—and those derived from them—Huxley (12). Lunar age values were obtained and transformed to gestational age, which ranged from 22–25 weeks.

Both of these methods, gestational age from foot length and from diaphyseal length, provided closely comparable age estimations and when later compared to known sonographic age, confirmed their usefulness. The methodology for gestational age estimation is fully described elsewhere (13).

### Discussion

We present a case history in which an obese young woman hand-carried an ultrasound report to her gynecologist requesting an elective abortion. The doctor, after reviewing the report, conducting a physical examination and acting in good faith, began to perform an abortion on a woman he thought to be 17 weeks pregnant. In the process of dilation and curettage, he realized that the patient was further along than suggested by the report, and based upon his previous experience, assigned an age of 26 weeks. He then immediately contacted local authorities, who submitted the remains to OME. Examination of these remains by a forensic pa-



FIG. 5—The antebrachial and crural segments were placed into position for radiography.



FIG. 6—The radiographs allowed for measurements of the diaphyses used for gestational age estimation.

thologist uncovered various body segments of undeterminable age. The case was then assigned to a forensic anthropologist, who obtained an age of 23–26 weeks from foot length and 22–25 weeks from diaphyseal length (13). These values corresponded closely to the age of 23 weeks 6 days derived from the original sonography report later supplied by the radiology clinic. Thus, the patient used another sonogram report and underwent an abortion to remove a 23 week 6 day fetus.

Since abortions can be conducted up to 20 gestational weeks in Arizona without filing a death certificate, this particular case is important. After 20 gestational weeks, a death certificate must be filed (A.R.S. 36-329), and if the fetus is deemed viable, then special precautions must be followed to maintain the life of the fetus (A.R.S. 36-2301) (3). In this case, the doctor was unaware of the gestational age, and thus, of possible medical and legal complications from performing the procedure. Moreover, a physician might have other reservations about aborting a fetus of this advanced age. For these reasons, we believe that sonography reports hand-carried by the patient should be confirmed with the radiology clinic prior to the procedure if gestational age determination is inconclusive based upon physical examination of the patient.

While incidence of legal abortion has generally increased over the last several years, abortions in Arizona are approximately half the national average (2), live births almost double. This is especially true of teenage abortion rates, which have dropped from 28.8 to 16.3 per 1000 (a decrease of 12.5 per 1000) with live births rising from 67.0 to 79.1 per 1000 (an increase of 12.1 per 1000) between 1985–1995. This suggests that while abortion rates have

dropped, live births have increased, such that there is only a 0.4 decrease in pregnancy per 1000 in women aged 15–19 (14). In Arizona, all abortions are documented through the Department of Vital Statistics, which functions in the capacity of demographic record keeping. This type of information can be helpful in selecting audiences for planned parenting and prevention of unwanted pregnancy.

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