Table 2.—Indications for Amniocentesis in 91 Cases*

INDICATION	NUMBER
Assessment of fetal maturity	27
Genetic counseling	22
Therapeutic amniocentesis for hydramnios	16
Management of Rh isoimmunization	13
Fetoplacental function test	8
Previous fetal anomalies	4
Detection of fetal anomalies	3

*Two patients had more than one indication for amniocentesis.

Table 3.—Results of Amniocentesis: 141 Procedures in 91 Patients

TIME PERFORMED (Gestational Week)	TOTAL (No.)	SUCCESSFUL (No.)	UNSUCCESSFUL (No.)
14-16	3	1	2
16-20	13	12	1
20-24	18	17 (2)*	1
24-28	11	10	1
28-32	27	26 (2)	1
32-36	28	27 (4)	1
36-40	32	30 (5)	2
40	9	8	1
Total	141	131 (13)	10 (0)

*Numbers in parentheses indicate cases in which diagnosis could not be made because of anterior presentation of placenta.

comprise 70% of all indications for this procedure. In a few instances, amniocentesis was not possible due to an anterior placenta. Nonetheless, the rate of successful diagnoses obtained in the entire group was extremely high (Table 3).

Risk to the mother. There are several possible risks of amniocentesis that may affect the mother; however, only a few instances of maternal morbidity have been observed. These risks may include:

- Amniotic-fluid embolism
- Hemorrhage
- Peritonitis
- Abdominal pain
- Abortion (premature labor)
- Abruptio placentae
- Premature rupture of membranes

Risk to the fetus. Although fetal complications of amniocentesis are relatively more frequent than maternal complications, fetal effects attributable to the procedure are rare. They have included:

- Death due to disruption of fetomaternal circulation or amnionitis
- Injury to umbilical cord
- Hemorrhage
- Abortion or premature labor due to ruptured membranes
- Fetomaternal transfusion
- Possible teratogenic effect

Experimental Studies of Amniocentesis

The possibility of a teratogenic effect of amniocentesis recently attracted the attention of several investigators. In certain small experimental animals such as mice or rats, there occurs a phenomenon known as the "post-amniocentesis dysmelic syndrome." Dr. Jimbo of our department performed amniocentesis unilaterally on a uterine horn of Wistar rats on day 15.5 of gestation. Fifty-four fetuses were delivered on day 21 and examined histologically; animals delivered from the opposite uterine horn served as controls.

As shown in Table 4, in the experimental group 43 fetuses were aborted; 30% showed adhesions to the amniotic membrane. In the control group, two fetuses died *in utero* and none of the 52 survivors showed any significant abnormalities. Ten of the 11 viable fetuses from the uterine horn subjected to amniocentesis had