

THE YEAR BOOK *of* OBSTETRICS *and* GYNECOLOGY

(1957-1958 YEAR BOOK Series)

EDITED BY

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YEAR BOOK QUIZ

THE NEW YEAR BOOK OF OBSTETRICS & GYNECOLOGY (Published October, 1957)

The scores of significant world-wide advances detailed in the latest YEAR BOOK shed important light on the new diagnostic and therapeutic procedures applicable to the type of cases seen most frequently in this field of practice. Test your familiarity with the current literature by trying the questionnaire that thousands of physicians look forward to each year.

- 1 What vitamin may help correct male infertility when no specific cause can be found?
For the answer, see page 323.
- 2 What is considered the best time for dermatome massage to induce labor?
See page 150.
- 3 What disease may predispose to endometrial ossification?
See page 521.
- 4 What is considered the best measure of diet adequacy in pregnancy?
See page 5.
- 5 Why is the Trendelenburg position considered obsolete for pelvic operations?
See page 396.
- 6 In tubal pregnancy, why is it wise to remove the ovary on that side too?
See page 47.
- 7 What treatment has been used successfully to correct uterine hypoplasia?
See pages 535-6.
- 8 What important cause of breech presentation is all too often ignored?
See pages 209-210.
- 9 What syndrome has been called "the disease with 20 names"?
See page 309.
- 10 Pregnancy should be interrupted in the diabetic after what week?
See page 75.
- 11 Which is considered more important in cervical cancer etiology, number of confinements or early marriage?
See page 450.

(OVER)

- 12 What relation does virility seem to have to sex of progeny?
See page 269.
- 13 In mild endometriosis, what medical regimen may be of value?
See page 427.
- 14 What is believed to be the basic tissue lesion in pregnancy toxemia?
See page 120.
- 15 What time factor should be set up for diagnosis of post-menopausal bleeding?
See page 549.
- 16 What is considered the safest anticoagulant therapy during pregnancy and lactation?
See page 236.
- 17 How soon do labor-halting effects of relaxin begin?
See page 137.
- 18 What is probably the commonest cause of the vaginal discharge seen in private patients?
See page 410.
- 19 Give 2 contraindications to external version. What is the one danger associated with this?
See page 194.
- 20 In what etiologic circumstance should vulvectomy be done for leukoplakia?
See page 509.
- 21 How does cancer of nonreproductive tissue appear to be affected by pregnancy?
See page 103.
- 22 What approach is important in care of the pseudohermaphrodite?
See page 579.
- 23 Estrogen therapy alone is dangerous in threatened abortion associated with what?
See page 33.
- 24 What is the most common type of cervical cancer in children under 15?
See page 463.
- 25 What is considered the major symptom of hydatidiform mole?
See page 88.

The New YEAR BOOK OF OBSTETRICS & GYNECOLOGY, edited by J. P. GREENHILL, M.D., Cook County and Michael Reese Hospitals. 608 pages; 33 illustrations. \$7.50.

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OBSTETRICS

PREGNANCY

PHYSIOLOGY

Diet in Pregnancy. Michael Newton¹ (Univ. of Mississippi) believes that emphasis on diet in pregnancy should be positive. The main theme of diet instruction during pregnancy should not be of restriction, but of eating the kind of food which will give the patient a healthier and happier pregnancy and a healthier baby.

Pre-eclampsia-eclampsia or toxemia of pregnancy, one of the most important complications, seldom occurs in women with exceptionally superior diets during pregnancy. Other complications occur more frequently in women with poor diets during pregnancy.

Diet is also related to time of birth, birth weight and health of the baby. The most generally accepted standards for diet during pregnancy are those recommended by the Food and Nutrition Board of the National Research Council.

Protein intake rather than calories should be the measure of adequacy of the diet. Protein should come mostly from animal sources: meat, fish or poultry, eggs, milk and cheese. A woman consistently on a diet high in protein usually obtains enough of the other elements, with certain exceptions. A diet entirely composed of protein and including a wide variety of fish, organ meats, milk, cheese and eggs, would yield an adequate amount of most of the other items, except vitamin C and possibly vitamin D. Excessive weight gain is also avoided by a high protein diet.

Because there is no assurance that the diet of a patient will be adequate, Newton usually prescribes one of the many available vitamin and mineral compounds which contain calcium, iron and particularly, the vitamin B complex. It is important to emphasize to the patient that pills cannot substitute for but only supplement the rest of the diet. Specific

(1) J. M. A. Alabama 26:1-5, July, 1956.

dietary advice should start with the first prenatal visit and continue throughout pregnancy. The diet prescribed should be adaptable to special problems, especially those of nausea and vomiting of early pregnancy, obesity and fluid retention.

► [Burke (Bull. Mat. Welf. 3:12, 1956) says that the old belief that the developing fetus takes everything it needs from the mother irrespective of her nutritional status is false. The fetus is parasitic on the mother to a degree which depends on her own nutritional state and diet during pregnancy. Research data repeatedly indicate that if the mother is sufficiently depleted nutritionally, the fetus may suffer to spare her. Greater attention to the content of the diet of the mother benefits both mother and infant. The diet needed during pregnancy is more special than generally appreciated because, as pregnancy advances, requirements of proteins, minerals and vitamins are increased considerably more percentage-wise than is the caloric requirement. It takes about 2,000 calories of carefully selected foods to meet the daily increased need for nutrients other than calories. This means that a woman's free choice of food is considerably narrowed during pregnancy if the important structural and regulatory foods are to be eaten in the optimal daily amount. When total protein needs are met by essential foods, all other nutrients except ascorbic acid, vitamin A and vitamin D are provided in reasonably good amounts because of their natural association with protein in food. Protein is also one of the nutrients easy to check for clinical purposes so that the amount usually consumed can be ascertained. When protein is deficient in the diet of the pregnant woman the intake of calcium and phosphorus, iron, riboflavin and other B vitamins is usually deficient also. If protein is not supplied by daily foods, the patient has no other way of obtaining it. Burke's study showed that only 10-15% of the women interviewed were taking the needed amount of protein. In fact, 15-20% were taking less than 45 Gm. when first seen in the prenatal clinic. While the cause of toxemia of pregnancy is still controversial, it is generally accepted that a well-balanced high protein diet acts as a preventive measure.

Newman (Obst. & Gynec. 8:561, 1956) studied the effects of administration of a variety of antepartum supplements to pregnant women and found that they produced increased retention of calcium in some. Phosphorus retention was decreased or increased, but in either event there was no marked alteration in serum levels of calcium and phosphorus. Each patient demonstrated individual differences in amounts of calcium and phosphorus retained. Hardy (Obst. & Gynec. 8:565, 1956) made biochemical studies and clinical observations on 50 patients who received a variety of prenatal supplements containing vitamins and minerals. Oyster shell calcium carbonate seemed to be a most satisfactory source of calcium for supplementation of diet during pregnancy. Calcium is better absorbed in absence of phosphorus. Oyster shell calcium which is phosphorus free appears to be well absorbed by the body.

Harrell and associates (Metabolism 5:555, 1956) found that the mean intelligence determined by conventional testing methods at ages 3 and 4 was significantly higher in those whose mothers had received vitamin supplements during the latter part of pregnancy than in those whose mothers received an inert control tablet. Benefits were most apparent in the group receiving a supplement of thiamine, riboflavin, niacinamide and iron, less so for those who received only thiamine or only ascorbic acid. No significant differences were demonstrated in a similar study among Kentucky mountain women, whose usual and unsupplemented diet was more nearly adequate than that used in the Norfolk homes.

Coopersmith (Obst. & Gynec. 8:235, 1956) found that the combination of 15 mg. Thorazine® and 5 mg. Dexedrine® produced excellent results in combating nausea and vomiting of pregnancy. Side reactions were few and none was serious, each drug counteracting the undesirable effects of the other. Dexedrine® elevates the mood and is frequently valuable in early pregnancy.

Giorlando and Mascola (Am. J. Obst. & Gynec. 73:444, 1957) report 12 cases of hyperemesis treated successfully with hypnosis. They say that the methods are simple and can be mastered by any physician.

Durham (Brit. M. J. 2:1276, Dec. 1, 1956) used buclizine hydrochloride for vomiting of pregnancy in 36 women. The results showed that 53% were completely relieved, 14% were much improved, 19% were improved, 5.5% were the same and 8.5% became worse.

Posner and associates (Obst. & Gynec. 9:270, 1957) studied 600 patients in the 3d trimester of pregnancy and found that 394 had craving, 196 had no craving and 10 had pica. Cravings were attributable to superstition, psychologic factors or physiologic needs that exist during pregnancy. The most common craving was for Argo starch.—Ed.]

Integration of Cephalopelvimetry into Obstetric Ward Service. From records of 350 patients, the Ball method of measurement was found 98-100% accurate when disproportion was absent, but when disproportion was present, at the inlet the method was 90% accurate and at the midpelvis only 73% accurate. The greatest fault was the large number of borderline x-ray diagnoses in which neither absence nor presence of disproportion could be established by x-ray measurements with any assurance. Gerhart S. Schwarz² (Columbia Univ.) extended the statistical analyses beyond correlation of measurements to outcome, to determine the usefulness of the method, its clinical ramifications and integration into an obstetric ward service.

In 9 patients, the measurements were contrary to the obstetric outcome. Of these, 4 were no surprise and did not mislead the obstetrician; qualitative x-ray findings overruled the measurements. However, statistically, all must be counted diagnostic errors of roentgenometry. The 60 cases of radiologic borderline disproportion must be counted as technical failures though obstetricians favorably inclined to roentgenometry might consider the x-ray diagnosis of borderline disproportion a useful warning sign. The fact remains that in 69 cases, roentgenometry failed because it provided an indefinite or incorrect answer.

It may be concluded that cephalopelvimetry is useful because it was able to reduce doubtful cases from 350 to 69, or to about a fifth. The x-ray department may act as a filter here. After most doubtful cases have passed through it, a few un-

(2) New England J. Med. 255:598-600, Sept. 27, 1956.

resolved cases remain. Only in 5 patients (1.4%) was the procedure misleading. This is not too serious a fault, because the obstetrician does not rely on x-ray measurements alone. Roentgen cephalopelvimetry was used sparingly in this series. Only when there was reasonable clinical doubt of the presence or absence of disproportion was the procedure requested. In institutions in which it is used more liberally or routinely, the number of normal cases among those examined radiographically will be much larger. Since x-ray cephalopelvimetry is most accurate and definite in normal cases, the percentage of failures will be considerably less.

► [Thoms (Obst. & Gynec. 8:745, 1956) describes a technic in which the inlet view alone can be used for routine screening purposes, reserving the lateral view for instances in which the pelvis warrants further study. Any pelvis which shows dimensional restriction that will delay or interfere with passage of a normal-sized infant in normal position must be considered as contracted. Information furnished by x-ray being but a part of the general pelvimetric survey, it stands to reason that no roentgenologist should take the responsibility of offering prognosis unless he knows all the clinical findings as well. Interpretation of x-ray films should be made also by the obstetrician, for it is he who must take the final responsibility for planning labor procedure. Even in women well above the average stature a knowledge of the size and the shape of the whole pelvis is important obstetrically.]

Wei and associates (Am. J. Obst. & Gynec. 72:1015, 1956) studied 300 cases of unselected Chinese female pelvises by the Colcher-Sussman technic and found a comparatively low incidence of anthropoid type of pelvis. There was marked narrowing of the transverse diameters in both midpelvis and outlet. The capacity of the pelvic inlet is slightly greater in the Chinese in comparison with the American but the midpelvis and outlet are smaller than in the American and the Filipino. In the evaluation of inlet pelvic capacity it seems reasonable to take the shorter obstetric conjugate or anteroposterior measurement of the "actual inlet" into primary consideration.

Dugan and Black (Am. J. Obst. & Gynec. 73:89, 1957) show that women with kyphoscoliosis compare favorably with those not so afflicted in their ability to conceive, to deliver vaginally and to withstand successfully postpartum complications. Their grave thoracic deformities do not restrict their pelvic capacity for childbirth. Vital capacity studies and chest films demonstrate that the patient with kyphoscoliosis is a pulmonary as well as a cardiac and skeletal cripple. Treatment should be directed toward prevention of overexertion and fatigue, control of weight gain and sodium restriction in diet. The occurrence of pulmonary infection or evidence of cardiac failure must be treated actively by hospitalization. Respiratory depressants such as morphine or its derivatives should not be given to patients with kyphoscoliosis.—Ed.]

Clinical Determination of Pelvic Outlet Capacity: Adjunct to Roentgenometric Survey of Upper Pelvis. Experience in evaluating outlet capacity by both clinical and x-ray technics has shown that rather well established outlet measurements do not have the desired usefulness. Determination of

the outlet anteroposterior diameter as here defined, with determination of the available (corrected) anteroposterior diameter in instances of abnormally narrowed pubic arch, is the most satisfactory index to outlet capacity, according to Herbert Thoms and Irving Friedman³ (Yale Univ.).

The anteroposterior diameter of the outlet is the distance



Fig. 1.—External pelvimeter (used as calipers) and metal ring gauge. Measurement between caliper ends is made directly on a centimeter scale. (Courtesy of Thoms, H., and Friedman, I.: *Am. J. Obst. & Gynec.* 72:635-640, September, 1956.)

from the lower margin of the symphysis to the lowest fixed sacral or coccygeal segment (usually the tip of the sacrum). The so-called available (or corrected) anteroposterior diameter is the distance extending from a hypothetic pubic arch to the posterior end point mentioned. These diameters can be determined with reasonable accuracy with the use of a metal ring gauge and calipers (Fig. 1).

(3) *Am. J. Obst. & Gynec.* 72:635-640, September, 1956.

TECHNIC.—With the woman in lithotomy position, the gauge is fitted into the arch with the free edge upward (Fig. 2). Separation of the soft tissue on either side by the examiner's free hand aids in slipping the gauge under the arch as close to the symphysis as possible. If there is more than 1 cm. distance between the ring gauge and the symphysis, a distance measured by reversing the position of

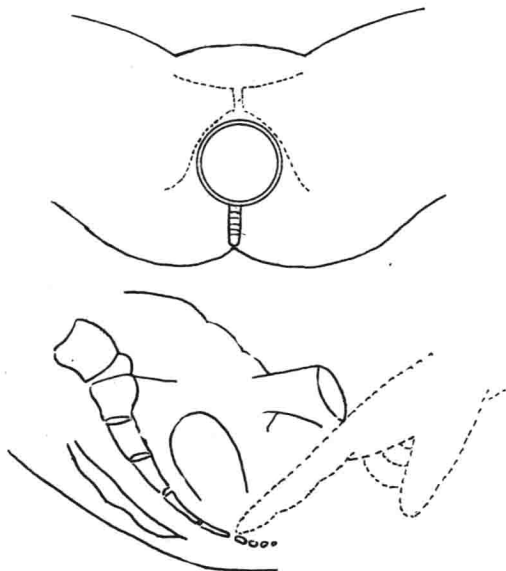


Fig. 2 (top).—Metal ring is fitted externally under pubic arch in line with descending rami.

Fig. 3 (bottom).—Measurement can be made internally with forefinger as in "diagonal conjugate" maneuver.

(Courtesy of Thoms, H., and Friedman, I.: *Am. J. Obst. & Gynec.* 72:635-640, September, 1956.)

the gauge, using the scale against the symphysis, the available anteroposterior diameter is determined.

Assuming that this distance is 3 cm. would mean that the available anteroposterior diameter must be measured from a hypothetical point in the midline in the plane of the inner borders of the descending rami at a point 3 cm. below the symphysis. The position and mobility of the coccyx are established by determination of the lowest fixed segment in the sacrum or coccyx. This is done by rectal examination combined with external palpation of the coccyx in the natal cleft. The coccyx then lies between forefinger internally and thumb externally.

After the position of the lower edge of the lowermost fixed sacral segment has been established, an identification mark is made on the skin opposite in the natal cleft. The anteroposterior diameter is measured by calipers from a point in the midline at the lower margin of

the symphysis to the point marked in the natal cleft. Measurement between the tips of calipers is made directly on a centimeter scale with 1 cm. deducted for thickness of the sacrum and soft tissues. This measurement may be determined vaginally with the forefinger of the examining hand in contact with the posterior end point (Fig. 3) and the base of the forefinger against the lower edge of the symphysis (as in the diagonal conjugate maneuver), measuring the intervening distance on the centimeter scale. For routine purposes the external method is preferable because the posterior end point can easily be identified.

In determining the available anteroposterior diameter in instances of narrowed arch, fitting the metal ring gauge under the pubic arch establishes the anterior end point at the top of the ring. The ring is steadied in position by an assistant and the tip of the anterior area of the calipers brought to the top of the circle. In addition, knowledge of the midplane transverse dimension (interspinous), as determined by x-ray, is essential for satisfactory prognosis.

Isometric Method of Pelvimetry with Clinical Correlation.

The method of Steele and Javert has been used, with the inlet classification of Caldwell and Moloy, at the St. Paul Clinic in Manila for 4 years. Radiologic examinations of the pelvis of 80 obstetric patients (70 Filipino and 10 Chinese, aged 19-44) were made, based on various indications for pelvimetry, such as suspicious pelvis on office evaluation, postmaturity, primigravida with breech, failure to make progress in labor, etc. In 10 instances, x-rays were taken during labor, and in 70 at or about term. The prognosis of delivery was based on the post obstetric history, clinical palpation and findings of x-ray pelvimetry. The influence of such clinical factors as intensity of uterine contractions, moldability of the fetal head, pliability of the soft parts and condition of the fetus cannot be overlooked.

A. Baens, P. S. Baens and J. M. Agutaya⁴ found that cesarean section was anticipated in 22 patients because of strong obstetric indications, vaginal delivery in 32, breech delivery in 3 and twin vaginal delivery in 1. A full test of labor was given to 22 patients. Finally, cesarean section was done on 22, 3 had breech deliveries and 1 had spontaneous twin delivery. Of those in whom vaginal deliveries were predicted, 3 had cesarean sections, 15 delivered spontaneously; 3 had midforceps, 7 low forceps and 4 no record. Of those given a full test of labor, 12 had cesarean section, 4 spontaneous delivery, 3 midforceps, 2 low forceps and 1 no record. The morbidity rate was 23.43%. There was no maternal mor-

(4) Philippine J. Surg., Obst. & Gynec. 2:65-78, May-June, 1956.