

Pelvic Scoring for Elective Induction

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IN MANY CLINICS, elective induction of labor has become a frequent and acceptable procedure justified by reportedly satisfactory results. The proponents offer as support the resultant short, easy, and convenient labor associated with a minimal and an acceptable perinatal mortality. In other areas, elective induction is condemned with equal vigor as being not only unnecessary but actually dangerous, incurring an unnecessary risk to both the mother and her child.

As with any other controversial procedure, the truth and the scientific merit must lie somewhere between these divergent points of view. This difference in opinion and the difference in reported results can derive only from variations in two phases of induction: the technic itself or the manner of selecting candidates considered suitable for this procedure.

It appears that the technic of elective induction has been well standardized and does not represent the basis for the reported differences in results and opinion. The importance of and the method of performing an amniotomy are well documented, and it is accepted that this is an essential part of elective induction. Likewise, the administration of oxytocin by slow, controlled, and carefully observed intravenous infusion is an essential part of any induction.

Instead, differences in results must ensue from variations in the method of selecting suitable candidates. Therefore, it would seem

of benefit to develop some standardized, easily determined, and easily recorded plan for the selection of those patients most suitable for induction, hopefully resulting in acceptable outcomes for all. Such a scheme is therefore presented. This method of selecting suitable candidates has been used over a period of several years and has proved both satisfactory and valuable.

BASIC REQUIREMENTS

Before any patient can be considered for elective induction of labor, certain minimal and basic requirements must be fulfilled.

Multiparity

While there have been numerous reports of good results with induction in the nulliparous patient, there still remains the pertinent question of why this should be done. Owing to the unpredictability of the duration of labor in the nullipara, even in the presence of apparently favorable circumstances, induction of labor brings little advantage for either obstetrician or patient. Few other advantages can be presented to justify induction of labor during the first pregnancy.

Pregnancy of 36 weeks' duration or longer

The vagaries of the memory of the obstetric patient, combined with physiologic variations in the menstrual cycle, make utilization of the expected date of delivery unreliable as a predictable end point of pregnancy. Nevertheless, in order to add one more deterrent to the delivery of a premature infant, no elective induction should

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be initiated until pregnancy has progressed to within 3 weeks of term.

Vertex presentation

It is recognized both clinically and statistically that there is increased risk for the infant who is delivered in a breech presentation. This increased risk should not be compounded by the additional risk of induction.

Normal previous and present obstetric history

If we are to perform elective inductions safely, any factor which alerts the obstetrician to an increased risk must be recognized as a contraindication. A history of previous abnormal pregnancy or the presence of any complicating factor in the current pregnancy must be considered a contraindication to elective induction of labor.

Advance knowledge and permission of the patient

No operative procedure should be undertaken without the knowledge or consent of the patient. There is not only a legal but also a moral obligation not to force any patient into a circumstance which she fears or about which she may not have full understanding. After suitable explanation, permission must be willingly granted before any elective procedures are initiated.

THE PELVIC SCORE

Once the criteria above have been satisfied, further determination of suitability for elective induction is made by evaluation of certain pelvic factors which usually presage the spontaneous onset of labor. Such factors are dilatation, effacement, consistency, and position of the cervix, and the station of the presenting part. The status of these factors can be determined reliably only by vaginal examination. Therefore, it is our policy to perform such examinations at each prenatal visit during the last week of pregnancy.

Each of these five pelvic findings is evaluated and scored as noted in Fig. 1, and the total of all five constitutes a guide for determining the proximity to the spontaneous onset of labor. At various periods before the expected date of delivery, such a score may range from 0 to 11, and the total score gradually increases as the end of pregnancy approaches. Experience has convinced us that elective induction may be successfully and safely performed when the pelvic score totals 9 or more. Under such circumstances, we have had no failures in induction, and the average duration of labor has been less than 4 hr. While it must be admitted that induction can be performed successfully under less favorable circumstances, it must also be admitted that interference under such circumstances is associated with increased hazard, longer than ideal duration of labor, and a decreased chance for success.

That such a scheme is reliable and predictable is demonstrated in Fig. 2. Here are recorded the scores obtained at the time of 500 vaginal examinations performed on patients who fulfilled all the basic criteria for induction but, instead, were allowed to progress to the spontaneous onset of labor. The

PELVIC SCORE				
	0	1-2	3-4	5-6
DILATATION	0	1	2	3
EFFACEMENT	0	1	2	3
STATION	0	1	2	3
CONSISTENCY	0	1	2	
POSITION	0	1	2	

Fig. 1. Method of pelvic scoring

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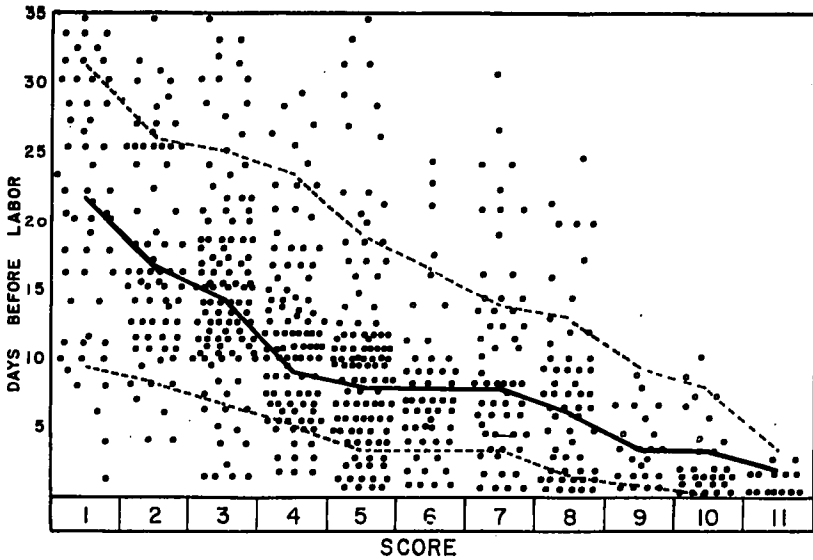


Fig. 2. Relation of total pelvic score and spontaneous onset of labor. Dotted lines equal 80% confidence limits; solid lines represent time to onset of labor.

average duration of pregnancy from the time of the examination to the spontaneous onset of labor is in direct relation to the pelvic score. Utilization of such a score permits the obstetrician to perform elective induction of labor in close proximity to the time when spontaneous onset of labor would naturally occur.

We have found such a method of scoring to be of value not only for determination of the optimum time for elective induction but also in certain other circumstances. First, the determination of a high pelvic score well in advance of the expected date of delivery may forewarn both obstetrician and patient of the possibility of premature labor and permit proper precautions to be initiated. Second, the determination of a low pelvic score close to the expected date of delivery forewarns both obstetrician and patient that either the expected date of delivery may have been erroneously calculated or that the possibility of postmaturity may be anticipated. Third, we have found the determination of such a score to be of value for more accurate determination of the most suitable date for the performance of elective repeat cesarean

section. Determination of the date for such a procedure solely on the basis of the expected date of delivery, even if combined with a clinical estimation of fetal size, is notoriously inaccurate and frequently results in the delivery of an infant weighing less than 2500 gm. Radiologic evidence of maturity has not completely solved this problem. We have found that it is helpful to use the pelvic score as evidence of imminent labor and to schedule elective cesareans accordingly, thus almost eliminating the elective delivery of a premature infant.

SUMMARY

A schematic method has been presented by which one may estimate the expected date of delivery more accurately than by the traditional methods. Such a scoring system is of extreme value in determining the optimum time for elective induction of labor and for elective repeat cesarean section. Scores which appear unrelated to the expected date of delivery may forewarn the obstetrician of the possibility of either premature labor or postmaturity.

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