

the maternal heart sounds, with the exception that the rate is twice as fast and the sound is not so loud. They very closely resemble the ticking of a watch. Their average rate is 140, and the highest and lowest rate in the case of infants who have been healthy at birth is, respectively, 160 and 120 (Depaul), but in pathological cases they may be much lower, or so high that they can scarcely be counted. Some men claim that a slow heart count indicates a male child, while a rapid count indicates a female child.

I do not know just how much reliance most men put upon heart sounds for diagnostic purposes, but in the cases that I have seen during this year I have placed great reliance upon them, and have rarely seen them fail if their significance is properly appreciated. One should always remember the following rules:

1. In a normal primipara, if the case is a head presentation the heart sounds will be below the umbilicus, on the left side in an l.o.a. and on the right side in an r.o.a. (Diagram 1.)

2. If the case is an occipito anterior the heart sounds will have their site of maximum intensity close to the middle line—that is to say, about one to two inches from the middle line; while if it is an occipito posterior position the site of maximum intensity will be away out in the flank.

3. In breech cases, before the lower pole has started its descent the heart sounds will be heard at the level of or above the umbilicus on the right or left side according to the position.

*Exceptions to these Rules.*—1. In multiparæ the head may not engage until after dilatation has taken place, so you cannot put much dependence upon their position as regards their height in the abdomen; but, of course, their significance as to right and left is unchanged.

2. On account of the rectum being on the left side it is only natural that there is more room in the right oblique diameter, hence the great majority of cases start in this diameter, either as a left occipito anterior, or as a right occipito posterior. It is this right occipito posterior position of the fetus that is the stumbling-block to so many men, especially as the great majority of these cases turn to the second position as they descend into the pelvis. While the occiput is posterior the head will have a tendency to be in an extended position. This throws the chest forward so that the heart sounds are heard in front near the middle line, because the chest is in close contact with the abdominal wall. Therefore, when we locate the heart sounds in the site for the