

## Short Clinical Review: The Specific Indications of Epidural Analgesia during Labor

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It is habitual to apply an epidural analgesia at some point of labor to decrease the pain produced for the cervical modifications and the uterine contractions [1]. In spite of other options, this analgesia is the less criticized by neonatologists because the few effects over the fetus. The use of opioids as analgesics is associated with pharmacologic depression of the newborns and an increase need of naloxone to reverse this pharmacological status. For this reason in our Clinics, the use of meperidine and other similar drugs was gave up.

The target is not to lock the total pain which is against the normal evolution of labor but to try that the patient feel only the necessary pain to not suffer to much but without interfere in the labor evolution. To achieve that, the anesthetists have several options that do. It is not the target of this communication, but they can reoccur to an epidural analgesia, a combined spinal-epidural or in special cases to a sacral or directly an spinal analgesia according the situation.

It is not good for labor evolution, apply to early in labor the epidural analgesia. If the cervix is not more than 50% effaced and no more than 3 or 4 cm dilated, the epidural could be counter productive. In this cases, when the patient complain of too much pain but epidural is not indicated, we only ask to the anesthetist to put the catheter in the epidural place but only administrate fentanyl as analgesic. It works like we had been used meperidine over the cervix and produce analgesia enough to allow continue with labor.

But the specific point at the present time is the case known as active cervix or cervical dystocia [2,3]. It was named originally Schickele syndrome, but it is only the expression of an abnormal work of uterine contractions. We know that normally the uterine contraction is originated in the uterine fundus, go from the fundus to segment and is more powerful in the fundus. This triplet descendent gradient is described as normal contractions during labor and the objective is to push the fetus into delivery canal and allow the fetus to accomplish with all the different mechanisms of labor [4]. When the busy obstetrician find this situation, he or she could think about is in front to arrest of labor an reoccur to cesarean section. The fact is that it is not an arrest of labor but it is a modification in the triple descendent gradient.

So in this cases, the contraction is originated in the uterine fundus, go from the fundus to the segment but is more intense in the uterine segment than in the fundus. So, the propulsive effect does not occur and the cervix contract during every contraction (active cervix). It is produced by a stressful situation in some patients. In this case, they produce catecholamines that hold the oxytocin uterine receptors producing an anarchic contractile pattern [5]. It was already demonstrated that this contractile pattern may be reverted by the propranolol administration [6]. In the case of triple gradient inversion, there is a pivotal role attributed to epidural analgesia. There effect decreasing the pain produced for uterine contractions, also decrease the stressful situation of the patient and as a consequence, the levels of catecholamines go down increasing the number of free oxytocin uterine receptors. Commonly it is observed that in a few minutes, the triple descendent gradient of contractile uterine pattern return and cervical dilation start to progress as well as the labor evolution. So, too far to be in front of labor arrest, taking in account the effects of the stress over the labouring patient, we have here a precise indication of epidural analgesia to reverse the modified contractile pattern and achieve a labor evolution avoiding a not necessary cesarean section. One more time, the social times are different to the obstetrical times.

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