

Age old practice of Uterine Fundal Pressure in Labor - more risky than beneficial

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Abstract

The main objective of this study was to identify any advantage of uterine fundal pressure manouvre in vaginal delivery and to evaluate its obstetrical outcomes. The primary aim of decreasing the duration of the second stage of labour could not be substantiated; rather this manouvre itself was associated with risks. Significant findings noted with such practice were one case each of retained placenta and bladder atonicity besides increased evidence of maternal exhaustion in this group and such observations were not observed in the earlier studies.

Keywords: Fundal pressure, second stage, uterus, labor

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Introduction

The fundal pressure on the uterus during labor is an age old practice employed equally to deliveries conducted at home by birth attendants or at hospitals by health workers. The motive is based on the belief that the fundal pressure acts to add to the bearing down efforts of the mother in the second stage of labour [1]. But its application has remained controversial throughout [2].

Patients and Methods

A retrospective review based on 209 vaginal deliveries' record, during the period from 19th Mar. 2006 to 5th Sept. 2007 was evaluated. Those included were primigravida patients (aged 20-26years) of singleton gestation with cephalic presentation, having spontaneous onset of labour between 37-40 weeks with pelvis being adequate average gynaecoid (this being the inclusion criteria) and no evidence of cephalo-pelvic disproportion and/or IUGR (exclusion criteria). Method of sampling adopted was that only those subjects were considered who reported during the specified period and fulfilled the inclusion criteria. Sample size was regarded as appropriate to derive a definite conclusion and a single observer conducted the study to minimize the inter-observer errors.

Two groups were considered: group-I (n=101), where manual pressure was applied at the uterine fundus during the second stage of labour, and group-II (n=108), in whom no fundal pressure was exerted. The main objective was to note the difference in the duration of the second

stage of labor and secondary areas of concern were complications, if any, in the two groups like perineal injuries, need for instrumentation, APGAR score of the babies.

Observations

The average duration of the second stage in group-I was 34-55 min (mean = 49min), and in group-II-33-53 min (mean = 48min). As is apparent no significant difference was noted in our primary concern of this study. Regarding instrumentation, 3.96% patients required ventouse and 4.95% had outlet Forceps delivery in group-I (i.e. n = 9, 8.91%) versus 1.85% each respectively (n = 4, 3.70%) in group-II.

Second degree perineal tears and extension of episiotomy happened in 3 cases (2.97%) and 2 cases (1.98%) resp. in group-I (n=5, 4.95%) and only 1 patient i.e. 0.92% in group-II (n=1, 0.92%) had perineal laceration. One case of retained placenta was encountered in the patient in whom fundal pressure was applied i.e. group-I and had to undergo manual removal under general anaesthesia.

In none of the two groups was a severely asphyxiated baby born and the APGAR score was also no different and was between 7 and 9 at 1 and 5 minutes respectively.

Other significant findings noted were that in the group-I of uterine fundal pressure, maternal exhaustion and subjective feeling of pain was apparently more. One patient in this group had post-natal retention of urine for which bladder decompression was done twice with K-90 dispos-

able catheter and on recurrence had to be put on indwelling Foley's catheter for 72 hours which was removed after toning up the bladder with clamping & intermittent release on demand.

Discussion

Uterine fundal pressure is traditionally being applied by 'dais' and some health workers in the belief that it helps to increase expulsive efforts in labour so as to expedite the delivery and thereby shorten the second stage of labour, but in this regard, till date, no confirmed benefit has been associated with its use [3] as is also apparent in the current study (mean duration of second stage being 49 and 48 min in groups-I and II, resp.) Rather a number of complications have been linked with it, ranging from, severe perineal lacerations [4,5] uterine rupture [6,7] and acute puerperal uterine inversion [8]. Though complications like second degree perineal tears and extension of episiotomy happened in this study, no case of uterine rupture or acute puerperal inversion was noticed.

Conclusion

The purpose/ benefit for which uterine fundal pressure is primarily employed i.e. shortening the second stage of labour, is disproved by this study. Moreover, though no major complications were encountered, its application is fraught with increased evidence of maternal exhaustion with an enhanced rate of use of instrumentation during deliveries and lacerations on the perineum/extension of episiotomy. A case of retained placenta and another of bladder atonicity seen in this group are noted for the first time as such observations have not been mentioned in the earlier literature on the subject.

The inference concluded from the above study is that the application of manual pressure on the fundus of uterus in labour should be discouraged as it adds to the risks during parturition with no proven benefit, whatsoever.

Limitation of the current study was the lack of observation of intra-uterine pressure.

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