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FUNDAL PRESSURE PRACTICE IN THE LATE SECOND STAGE OF LABOR AMONGST THE HEALTHCARE PRACTITIONERS A SURVEY BASED STUDY

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ABSTRACT
BACKGROUND- Caesarean rates have increased considerably in present times. Obstetricians are performing lesser instrumental deliveries in second stage of labour due to less training and skills and fear of litigations.
Uterine fundal pressure is pressure applied to a woman's uterine fundus in the direction of the vagina during the second stage of labour with intention to promote or accelerate the time of vaginal birth.
METHODS- The study was a questionnaire – based study that was carried out via google survey forms. The survey was conducted amongst 700 Obstetricians from all over India via Google forms and we received 663 replies. The survey comprised of 8 questions which include practice of fundal pressure, who gives it, success rate, station at which it was given, its use along with instrumental delivery, use of episiotomy, complications if any and lastly the number of contractions for which the fundal pressure was employed by different obstetricians.
RESULTS- Fundal pressure was practiced by majority (94.9 %) either regularly or sometimes. Only few 5.1% doctors never used it. Most of the times, it was given by a healthcare worker (55.8%). Nearly one fourth of them (40%) achieved more than 70 % of success rate for vaginal deliveries. Large number of doctors, (56%) were giving fundal pressure at crowning. During instrumental deliveries 55.4 % practiced fundal pressure. Episiotomy was commonly employed (68.2%) before giving fundal pressure. There were no major complications during the procedure, except small perineal or vaginal tears. Half of the respondents practiced fundal pressure up to 3 to 4 contractions.
CONCLUSION – In cases of prolonged second stage, fetal distress, failure to progress and maternal exhaustion, fundal pressure is often used to assist vaginal birth. This shortens the second stage & reduces the need for instrumental deliveries or LSCS & improves perinatal outcome. In majority cases fundal pressure gives good results in achieving vaginal deliveries. Very few cases have adverse maternal outcomes in the form of perineal tears.

KEYWORDS- Fundal pressure, second stage of labour, vaginal births, instrumental deliveries, caesarean sections, outcomes

INTRODUCTION

Caesarean rates have increased considerably in present times. Obstetricians are performing lesser instrumental deliveries as required skill is lacking due to less training and there is fear of litigations.

Uterine fundal pressure is pressure applied to a woman's uterine fundus in the direction of the vagina during the second stage of labour with intention to accelerate the time of vaginal birth. It was first reported by Kristeller in 1867 from Germany, so it is also known as the Kristeller manoeuvre. [1]

With a prolonged second stage of labour, maternal exhaustion may reduce a woman's ability to generate sufficient abdominal pressure to facilitate her baby's birth. Application of external force through fundal pressure has been employed to assist vaginal birth, reducing the need for alternative and more invasive interventions to manage prolonged second stage such as vacuum extraction, forceps delivery or caesarean section. As it decreases the time for vaginal birth it is important in cases of fetal distress. Additionally, the use of fundal pressure in some resource poor settings may be required due to lack of access to alternative interventions. The fundal pressure is regularly used during caesarean section to assist the delivery of the fetus. Although fundal pressure has been widely used it has not been documented much. A 2017 Cochrane review[1] identified five randomized trials using manual uterine fundal pressure. They concluded that there is currently insufficient evidence for the routine use of fundal pressure on women in the second stage of labour. Because of current widespread use of the procedure and its potential to be used in a setting where other methods of assisted birth are not available, further good quality trials are needed.

A systematic review & meta-analysis (2021) from 76 studies (approx. 9 lakh women) across 22 countries showed a prevalence of Fundal pressure on an average of 23.2%. Countries regularly using Fundal pressure are Italy, Brazil, Egypt, Turkey, Germany, Korea, Japan and India. [2]

AIMS AND OBJECTIVES

1) To survey the Attitude and practice of obstetricians regarding the use of fundal pressure during the second stage of labour in order to achieve vaginal deliveries.

2) To survey the success rate and complications associated with the use of fundal pressure during the second stage of labour.

MATERIALS AND METHODS

The study was a questionnaire – based study that was carried out via google survey forms. The questionnaire was written by the primary author and was approved by rest of the authors, The survey was conducted amongst 700 Obstetricians, randomly selected from all over India. Google forms were sent to obstetricians, out of which 663 responded. The respondents were all qualified obstetricians having MD/ MS, DGO or DNB degrees.

The survey included 8 questions which included details regarding practice of using fundal pressure during delivery, person giving fundal pressure, success rate in vaginal deliveries, station at which it was given, use along with instrumental delivery, use of episiotomy during the procedure, complications if any and lastly the number of contractions in which the fundal pressure was employed by different obstetricians.

Uterine fundal pressure is applied manually by obstetricians or other healthcare workers during late second stage of labour. The principle of the procedure is to apply firm and moderate manual pressure on the uterine fundus with two fists of hands or both palms on both

the sides of uterine fundus in the direction of the pelvis. Fundal pressure is applied during uterine contraction, when patient is bearing down. Fundal pressure is stopped as soon as the contraction is over. Forceful or rapid pressure was to be avoided.

RESULTS

The respondents who took part in the survey were qualified Obstetricians from all over India with certified degrees in OBGYN. Use of fundal pressure during delivery in was employed by 94.9 % of respondents either in all patients or when necessary. Only 5.1% doctors were not using it at all. [Figure 1]. Fundal pressure when given was employed by paramedical persons i.e., nurse or aya in 55.8% of the cases whereas 39.1 % of them were given by doctors. Majority of the respondents that is 77.1 % had success rate > 30 % for vaginal deliveries with fundal pressure, out of which 40.1 % achieved more than 70 % success [Figure 2]. Majority of obstetricians that is 56 % preferred giving fundal pressure at crowning, whereas 13.6 % gave it at station >2 and 30.4 % gave it at station >3 [Figure 3]. Out of 55.2 % respondents who practiced fundal pressure during instrumental deliveries, 10.4 % used fundal always used it while remaining practiced it only sometimes. Episiotomy before giving fundal pressure was routinely practiced by 68.2 % of the respondents, whereas 24 % of them gave it sometimes, 7.8 % did not use it at all. Complications during the procedure included minor vaginal or perineal tears, only 5.1 % experienced major complications like anal sphincter injuries, 44.6 % reported none [Figure 4]. Fundal pressure was given during the active bearing down phase in second stage of labour, 52.3 % of obstetricians used up to 4 contractions, only 24.4 % gave it for more than 4 contractions while 23.3 % stopped after 1 or 2 contractions [Figure 5].

Figure 1

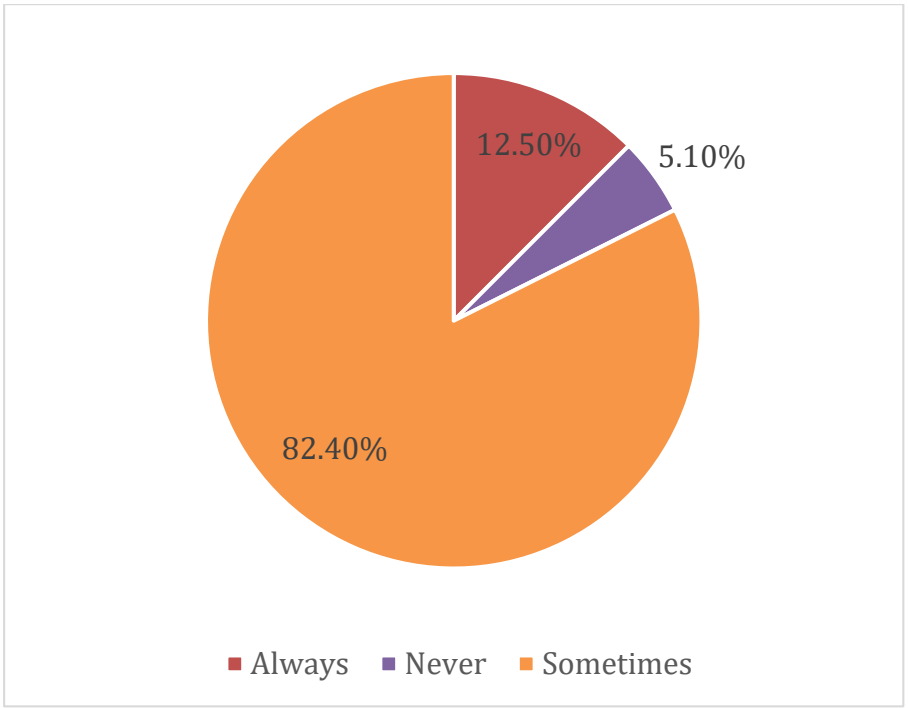


Figure 2

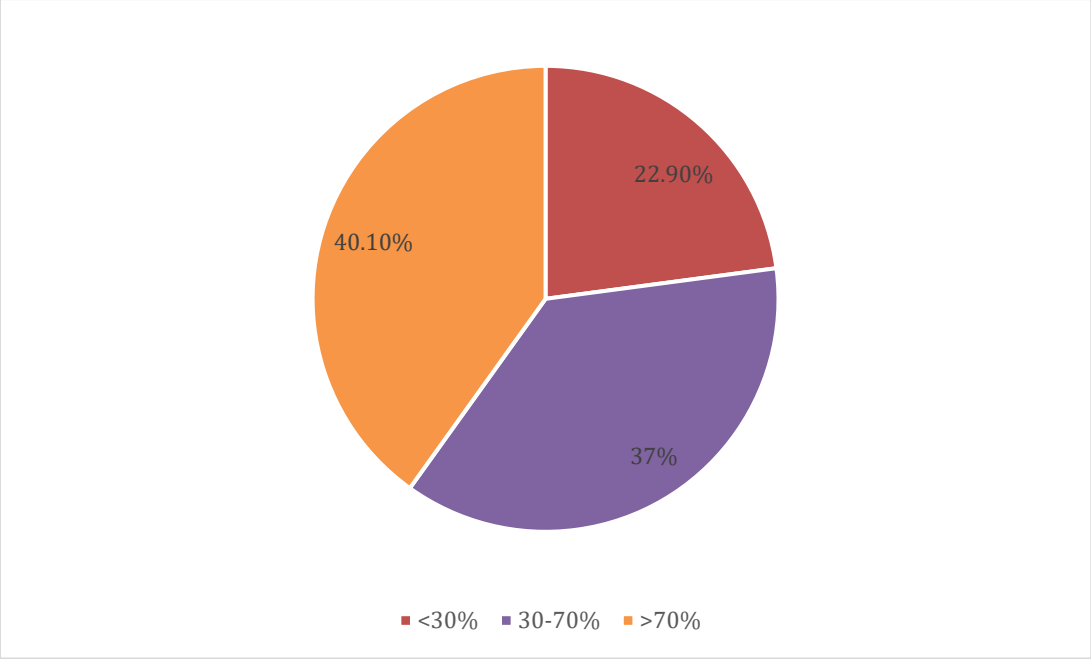


Figure 3

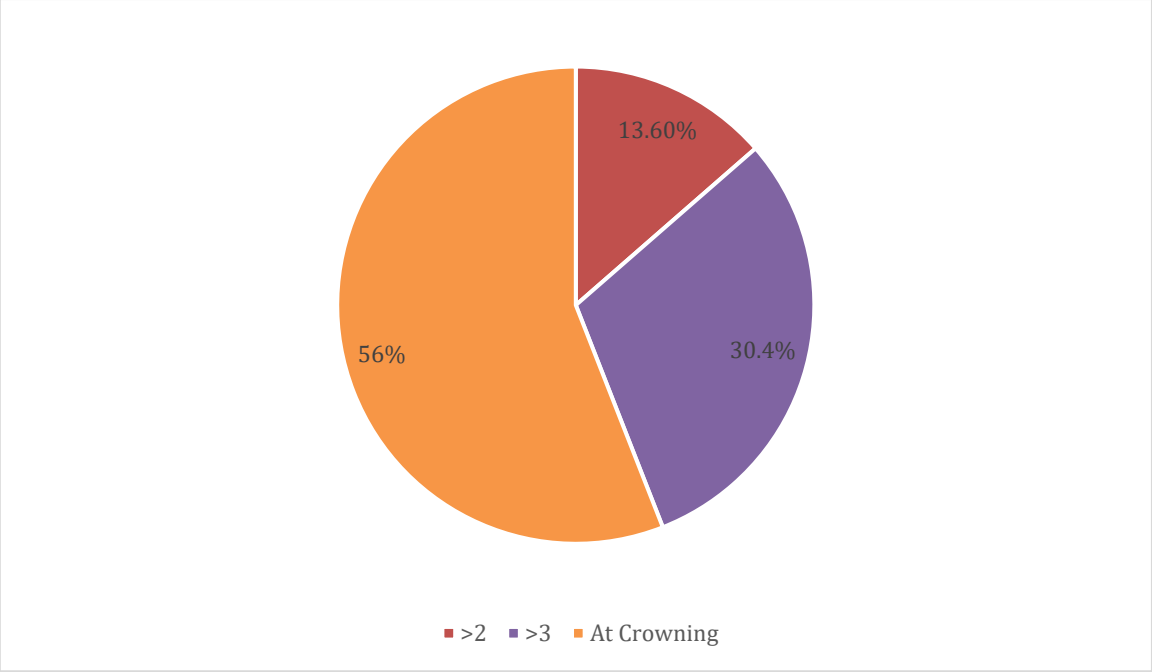


Figure 4

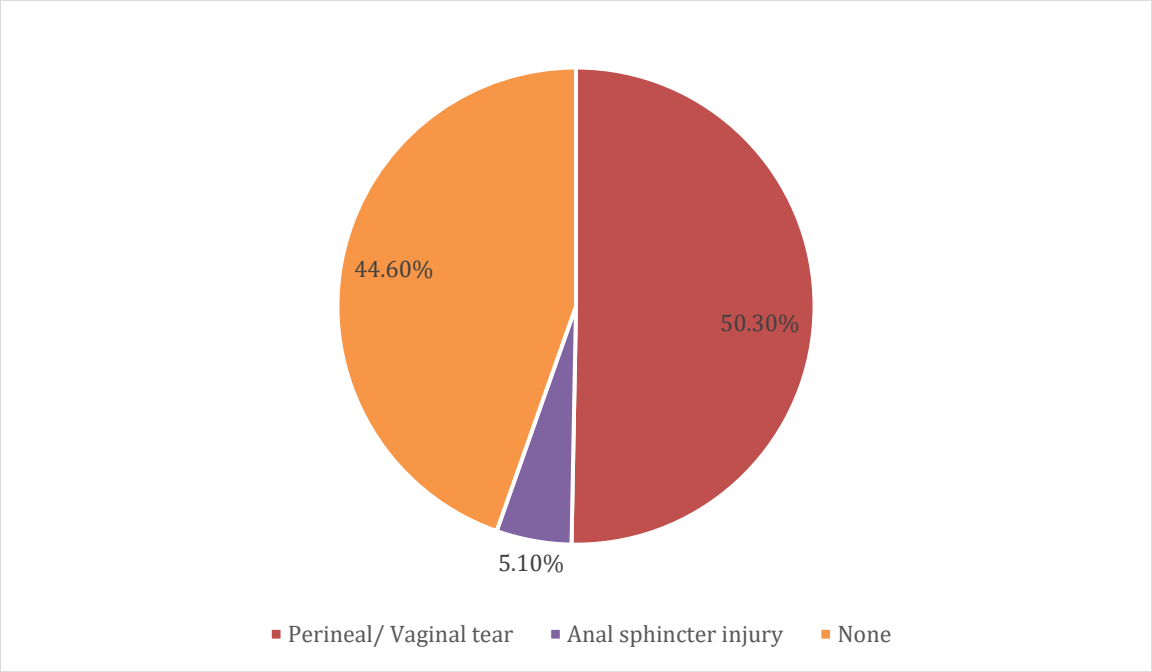
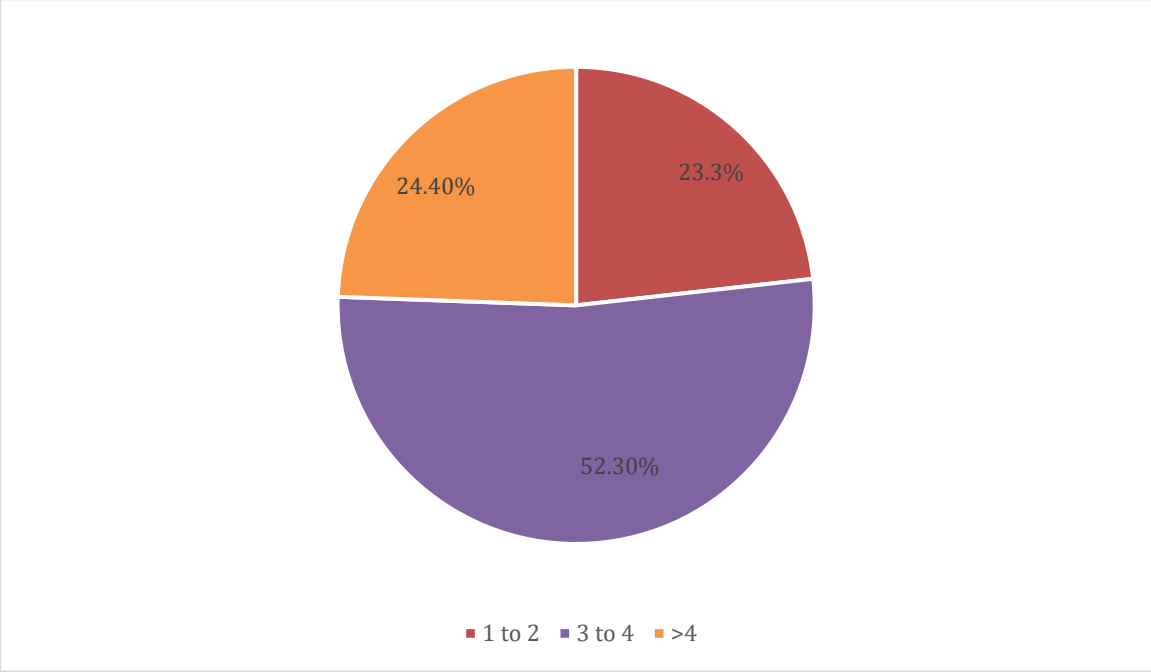


FIGURE 5



DISCUSSION

A google form survey was done on Fundal pressure during second stage of labour where 663 out of 700 doctors gave feedback.

Fundal pressure was practiced in all deliveries by 12.5% of the respondents, whereas 82.4% preferred using it sometimes while only 5.1 % were not using fundal pressure at all.

In 55.8 % were paramedical staff who were giving fundal pressure and 39.1 % were Doctors, ensuring that better skilled people performed the procedure, resulting in lesser complications.

Success rate associated with this procedure was more than 70 % in 40.1 % of the respondents therefore ensuring increased chances of vaginal deliveries. There was a fair 37 % who achieved 30-70% success and a minority of 22.9 % experienced a success rate of less than 30 %. This factor could be because of variability and subjectivity associated with the person giving FP and the obstetric factors associated with it also play a considerable role.

Crowning of head is a characteristic sign of impending birth during the second stage of labour. The presenting part of head of foetus is visible and firmly rimmed by the maternal vulval soft tissues. In our survey, more than half i.e., 56 % of them were giving fundal pressure at crowning, 30.4 % were giving it at station more than 3 whereas only 13.6 % were preferring it at station more than or equal to 2. Better results are seen when FP is applied after the crowning of head as premature fundal pressure can lead to failure and increased chances of perineal or vaginal tears.

The second stage begins with complete cervical dilatation and the duration of the second stage is highly variable.

Recently allowance of up to 3 hours for the second stage of labour is recommended. [3,4,5]

If the second stage of labour gets prolonged, maternal exhaustion sets in or fetal distress occurs, giving FP can increase the chances of successful vaginal deliveries and improves perinatal outcome.

In order to avoid or shorten the prolonged duration of second stage of labour, obstetricians need to use instruments (a vacuum device or forceps) or other procedures to aid delivery.

Amongst those who were practicing FP during instrumental deliveries, 10.4 % of respondents were using it routinely while 44.8 % used it when necessary. Instrumental delivery superadded with fundal pressure can reduce the chances of Caesarean sections when successful.

Episiotomy given during crowning was routinely practiced in 68.2 % just before giving fundal pressure, whereas 24 % gave it sometimes and only 7.8 % refrained from giving episiotomy all together.

In our survey perineal or vaginal tears were reported by 50.3 % of the respondents. Only 5.1% experienced major complications like anal sphincter injuries while 44.6 % of them did not face any complications at all.

More than half i.e., 52.3 % preferred giving fundal pressure up to 3 to 4 contractions during the second stage of labour. Whereas 23.3 % stopped after 1 to 2 contractions and 24.4 % continued even for more than 4 contractions.

CONCLUSION

In cases of prolonged second stage, fetal distress, failure to progress and maternal exhaustion applying fundal pressure is often used to assist spontaneous vaginal birth. This shortens the second stage & reduces the need for instrumental deliveries or LSCS & improves perinatal outcome. In majority cases fundal pressure gives good results in achieving vaginal deliveries. Very few cases have adverse maternal outcomes in the form of perineal tears. Benefits far outweigh the risks. Good quality trials are required to establish its value.

REFERENCES

[1] Hofmeyr GJ, Vogel JP, Cuthbert A, Singata M. Fundal pressure during the second stage of labour. Cochrane Database Syst Rev. 2017 Mar 7;3(3):CD006067. Doi: 10.1002/14651858.CD006067.pub3. Update in: Cochrane Database Syst Rev. 2009 Oct 07;(4):CD006067. PMID: 28267223; PMCID: PMC6464399.
[2] Farrington E, Connolly M, Phung L, Wilson AN, Comrie-Thomson L, Bohren MA, Homer CSE, Vogel JP. The prevalence of uterine fundal pressure during the second stage of labour for women giving birth in health facilities: a systematic review and meta-analysis. Repro Health. 2021 May 18;18(1):98. Doi: 10.1186/s12978-021-01148-1. PMID: 34006288; PMCID: PMC8132352.
[3] WHO (2018) Recommendations: Intrapartum Care for a Positive Childbirth Experience. World Health Organization, Geneva.
[4] (2017) Intrapartum Care for Healthy Women and Babies. National Institute for Health and Care Excellence (UK), London.
[5] (2019) ACOG Committee Opinion No. 766 Summary: Approaches to Limit Intervention during Labor and Birth. Obstetrics & Gynaecology, 133, 406-408. https://doi.org/10.1097/AOG.0000000000003081

ABBREVIATIONS

FP- FUNDAL PRESSURE

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Nil