



Modern Conducted Labor is Medically Assisted

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SUMMARY

Introduction: First child delivery stage lasts 12-16 hours not including any medications, while the second child delivery stage and grand multiparity last a couple of hours shorter. Oxytocin (*Syntocinon*[®]) is drug that facilitates well-fed delivery, therefore, induced labor assisted by peridural lasts approximately 4 hours less than natural labor not supported by any medication.

Aim: To make quantitative analysis of the medically assisted childbirth and spontaneous vertex delivery within three years (2014-2016).

Methodology: This paper is part of a non-commercial, retrospective, IV phase epidemiological study. The study was conducted at the Clinical Centre “Dr Dragiša Mišović, Dedinje”, Hospital for Gynecology and Obstetrics. The data are obtained from the *ZIS Monthly-Yearly Heliant Reports* of the Hospital for Gynecology and Obstetrics, Delivery room.

Results: In the Clinical Centre “Dr Dragiša Mišović, Dedinje”, Hospital for Gynecology and Obstetrics, Delivery room there is over 2000 childbirths annually. Number of pharmacologically assisted labors was 1290 or (62%) in 2014, in 2015 was 1318 or (61%) and in 2016 was 1286 or (60%). Using syntocinon, there was 585 or (28%) in 2014, in 2015, 513 or (28%) and in 2016, 639 or (30%) cesarean sections, urgent, planned and elective labors. Of the total 80% of newborns received Apgar score 9 (nine).

Conclusions: Labor induced by medication is a joint choice of a midwives and doctors health team because the flow of labor can be anticipated and influenced at any moment.

Keywords: delivery, oxytocin, pharmacology supported, midwife, gynecologist

INTRODUCTION

Obstetrician prescribes the therapy while the nurse-midwife applies it, as in any other case in medical field. Oxytocin (*Syntocinon*[®]) solution for injection / concentrate solution for infusion; 5 i.j./ml; 10 i.j./ml, Novartis Pharma Stein AG) is a synthetic nonapeptide, identical to oxytocin, which is a natural hormone of the pituitary gland rear lobe. It affects smooth

uterus muscles and causes their contraction, and due to this fact, it is mostly used in obstetrics [1,2,3]. As any other drug, it has its own indications and contraindications (table 1).

First child delivery stage lasts 12-16 hours not including any medications, while the second child delivery stage and grand multiparity last a couple of hours shorter [4]. Syntocinon is drug that facilitates well-fed delivery, therefore, induced labor assisted by

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Oxytocin	
therapeutic indications	<ul style="list-style-type: none"> - induction of childbirth with a clear medical indication; - labor stimulation in individual cases poor contractions of the uterus; - during cesarean section, after childbirth and placental removal; - prevention and therapy of postpartum uterine hemorrhage and uterine atony - in early stages of pregnancy, as an adjuvant therapy in cases of incomplete, preterm or spontaneous abortion.
contraindications	<ul style="list-style-type: none"> - oxytocin-susceptibility or any of the other substances included in the drug. - hypertonic contraction of the uterus, mechanical childbirth obstruction, fetal distress. - any condition due to the safety of the mother or fetus spontaneous childbirth is not advised <p>and / or the vaginal childbirth is contraindicated: significant cephalopelvic disproportion, fetal malpresentation, placenta previa or vasa previa, placenta abruption, prolapse or presentation of the umbilical cord, excessive stretching of the uterus and reduced uterine resistance to rupture as in multiple pregnancies, excessive fetal water, in women with a large number of previous grand multiparity, in the presence of scarring on the uterus as a result of extensive surgical interventions, including cesarean section.</p>

Table 1. Oxytocin therapeutic indications and contraindications

peridural lasts approximately 4 hours less than natural labor not supported by any medication [5]. More than 50% of labors are completed by administering some drug because this way can be obtained the necessary strength and the contraction interval, and it is easier and quicker for the mother to pull through certain stages.

Induced labor is influenced by medication or some kind of obstetric intervention. In the Republic Health Insurance Fund (RHIF) classification, these services can be described with following multiple codes [6-8]:

90466-01 (90466-01) - Actively induced childbirth with obstetric intervention

90466-02 (90466-02) - Inducing childbirth with medical and obstetric interventions

90465-00 (90465-00) - Induction of oxytocin childbirths

90465-01 (90465-01) - Induction of prostaglandin childbirths

90469-00 (90469-00) - Completing the childbirth by vacuum extraction

90470-01 (90470-01) - Pelvic childbirth with manual assistance

16520-02 (16520-02) - Elective Cesarean section with incision on the lower segment of the uterus

16520-03 (16520-03) - Urgent Cesarean section with incision on the lower segment of the uterus

Natural childbirth isn't influenced either by medication or by any obstetric intervention during the first three stages. In the RHIF service classification [6-8] it's described as following:

90467-00 (90467-00) - Spontaneous labors

The most common usage of Syntoci-

non is for the induction or stimulation of contractions.

Induction involves 5IJ Syntocinon in a 500ml 0.9% NaCl solution 24 ml/h, therefore, it can be increased by half an hour. Naturally, obstetrician prescribes the therapy after pregnant woman examination [1].

In stimulation, it starts with the completely same therapy, but dose of ml/h is given after the gynecological examination, because it indicates labor stage, the extent of dilatation, while cardiotocography (CTG) shows contraction strength level [1].

In expulsion Syntocinon is used when contraction tensions are absent or stopped and patient needs help at the final stage. Syntocinon is then administered in a bolus of 5 IU in 20 ml NaCl of 0.9% per 1 ml or 2 ml, as the physician prescribes [1].

The induction of the labor shortens the duration of delivery, so it is also significant for the patient and for the entire team and contributes to a better outcome. Nowadays, with the help of pharmacology, more precisely, medication for well-fed delivery and medication for the elimination of pain, future mothers can finally enjoy the most precious day of life. It is very important for midwives that the patients suffer less from the pain and that delivery lasts shorter so when the expulsion occurs, they have better cooperation with the mother. Consequently, the outcome of the labor is much more favorable and the Apgar scores i.e. the evaluation of newborns are much better.

AIM

To make quantitative analysis of the medically

assisted childbirth and spontaneous vertex delivery within three years (2014-2016).

METHODOLOGY

This paper is part of a non-commercial, retrospective, IV phase epidemiological study. The study was conducted at the Clinical Centre “Dr Dragiša Mišović, Dedinje”, Hospital for Gynecology and Obstetrics.

The data are obtained from the ZIS Monthly-Yearly Heliant Reports of the Hospital for Gynecology and Obstetrics, Delivery room [6,7].

RESULTS

In the Clinical Centre “Dr Dragiša Mišović, Dedinje”, Hospital for Gynecology and Obstetrics, Delivery room there is over 2000 childbirths annually (Table 2).

Table 2. Total number of childbirths per year 2014-2016

Year	2014	2015	2016
TOTAL childbirths per year	2076	2156	2120

Table 3. Number of spontaneous labors 2014-2016

Year	2014	2015	2016
90467-00 (90467-00) - Spontaneous labors	1424	1428	1396

Table 4. Number of pharmacologically assisted labors in 2014-2016

Year	2014	2015	2016
90466-01 (90466-01) - Actively induced obstetric intervention labor	306	310	272
90466-02 (90466-02) - Medical and obstetric intervention labor	1290	1318	1286
90465-00 (90465-00) - Oxytocin induced labors	4	1	2
90465-01 (90465-01) - Prostaglandin induced labors	25	26	40
90469-00 (90469-00) - Completing labor with vacuum extraction	56	64	49
90470-01 (90470-01) - Pelvic labor with manual assistance	8	6	6
16520-02 (16520-02) - Elective cesarean section with incision on lower uterus segment	292	223	251
16520-03 (16520-03) - Urgent cesarean section with incision on lower uterus segment	293	390	388

During 3 years, the number of spontaneous labors in vertex position, that is, in non-pharmacologically supported labors was more than 1300 (Table 3).

Approximately 1% are labors without peridural anesthesia, and over 50% of the labors are induced with the help of Syntocinon [6].

Number of pharmacologically assisted labors was 1290 or (62%) in 2014, in 2015 was 1318 or (61%) and in 2016 was 1286 or (60%). Using syntocinon, there was 585 or (28%) in 2014, in 2015, 513 or (28%) and in 2016, 639 or (30%) cesarean sections, urgent, planned and elective labors (Table 4).

Of the total 80% of newborns received Apgar score 9 (nine), to the satisfaction of the entire team of Maternity clinic, including doctors, pediatricians, anesthetists, midwives, anesthetists and pediatric nurses [9].

DISCUSSION

Modern obstetric procedures involve safer and more comfortable childbirths.

Shortening labors of 4 and more hours lowers the trauma of the mother and the child and reduces the possibility of delivery and post-partum complications [2,3]. Today, patients are well-informed, pregnant women want to have a more comfortable, possibly pain-free modern well-fed delivery. The results of our study are in conformity with other authors, the number of pharmacologically-assisted labors is more than 80% of the total number of childbirths, i.e. labors not influenced by pharmacological or any obstetric intervention.

Conducted, modern labor helps to anticipate and influence the labor process at any moment. Syntocinon is necessary in pharmacologically-assisted labors whether it is completed operatively or vaginal. In third stage, all women that gave vaginal births receive 5 i.j. of syntocinon to facilitate the uterus contraction and the rapid stopping of bleeding.

CONCLUSION

Labor induced by medication is a joint choice of a midwives and doctors health team because the flow of labor can be anticipated and influenced at any moment.

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Savremeno vođeni porođaj je medikamentozno potpomognut

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KRATAK SADRŽAJ

Uvod: Porođaj prvorođanke traje od 12-16 sati kada se ne dodaju nikakvi medikamenti, kod drugorođanke i viserođanke traje par sati kraće. Oxytocin (*Syntocinon*[®]) je lek koji nam omogućava lakše vođenje porođaja, te dirigovani porođaj potpomognut periduralom traje i po 4h kraće od prirodnog porođaja ne potpomognutim medikamentozno. Više od 50% porođaja se završi uz davanje nekog leka jer na taj način možemo dobiti jačinu i interval kontrakcija koje su potrebne, te će porodilji biti lakše i brže da prođe kroz određene faze.

Cilj: Cilj ovoga rada je numericka/kvantitativna analiza vođenja porođaja medikamentozno i spontano tokom tri godine (2014-2016).

Metodologija: Ovaj rad je deo nekomercijalne, retrospektivne, epidemioloske studije, IV faze. Studija je sprovedena u Klinicko bolnickom centru (KBC) "Dr Dragisa Misovic", Bolnica za ginekologiju, odeljenje porodilista (Delivery room). Podaci su dobijeni iz ZIS Heliant izveštaji Bolnice za ginekologiju i akušerstvo Odeljenje Porodilišta mesečni-godišnji.

Rezultati: U porodilistu KBC "Dr Dragiša Mišović-Dedinje" je godišnje preko 2000 porođaja. Porođaja na koje smo pomogli farmakološki u 2014. god bilo je 1290 (62%); u 2015. god bilo je 1318 (61%); u 2016. god bilo je 1286 (60%). Porođaja završenih carskim rezom (SC) - hitnim i elektivnim planiranim, gde takođe koristimo Sy, u 2014. god bilo je 585 (28%); u 2015. god 513 (28%); u 2016. god 639 (30%). Apgar skor 9 (devet) dobilo je 80% novorođenčadi.

Zaključak: Dirigovan porođaj, porođaj potpomognut medikamentozno, je zajednicki izbor zdravstvenog tima - babica i lekar, i pacijenta - porodilje, jer u svakom momentu možemo predvideti i uticati na tok porođaja.

Ključne reči: porođaj, oxytocin, farmakološki potpomognut, babica, ginekolog

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