Robson Criteria for Cesarean Section - an Imperative and Emergent Necessity in Romanian Obstetrics

MIHAI DIMITRIU[1,2], BOGDAN SOCEA[1,2]*, LIANA PLES[1,3], DIANA-CLAUDIA GHEORGHIU[2], NICOLAE GHEORGHIU[1,4], ADRIAN NEACSU[1], CATALIN-GABRIEL CIRSTOVEANU[1,5], NICOLAE BACALBASA[1,6], CRISTIAN GEORGE FURAU[7,8], GHEORGHE OTO FURAU[7,8], MIHAIL BANACU[1,2], CRINGU ANTONIU IONESCU[1,2]

[1]Carol Davila University of Medicine and Pharmacy, Dionisie Lupu 37, 020021, Bucharest, Romania
[2]Sf. Pantelimon Emergency Clinical Hospital, 340-342 Pantelimon Road, 021661, Bucharest, Romania
[3]Sf. Ioan Clinical Emergency Hospital, Bucur Obstetrics Department, 10 Intre Garle Str., 040294, Bucharest, Romania
[4]Elias Emergency Hospital, 17 Marasti Str.,011461, Bucharest, Romania
[5]Maria Sklodowska Curie Emergency Clinical Pediatric Hospital, 20 Constantin Brancoveanu Str., 041434, Bucharest, Romania
[6]Dr. Ion Cantacuzino Clinical Hospital, 5-7 Ion Movila Str., 020475, Bucharest, Romania
[7]Vasile Goldis West University Arad, Faculty of Medicine, 94 Revolutiei Str., 310025, Arad, Romania
[8]Emergency Clinical Arad County Hospital, 2-4 Andreny Karoly Str., 310037, Arad, Romania

The cesarean section rate in Romania is among the top three in Europe and that it is among the top ranked in the world. Robson classification is a particularly useful tool for all factors involved in obstetrics. In our study, 840 cesarean births from 2018 were classified according to Robson Classification. Thus, the patients analyzed in the present study have in common an almost obvious trait: the indication for caesarean is, in mostly analyzed cases, not very clear. In fact, much of the cesareans studied are nothing but cesarean performed at the request of the patient. We believe that the urgent implementation of Robson Classification in maternity hospitals in Romania is not only necessary, but also extremely urgent, being a practical tool in determining the causes of certain obstetrical practices and customs.

Keywords: delivery, C-section, defensive C-section, Robson criteria, elective C-section, defensive medicine, C-section indications

It is no longer a novelty that the cesarean section rate in Romania is among the top three in Europe and that it is among the top ranked in the world [1-7]. Some of the most recent statistical dates offered by World Health Organization (WHO) for Romania contained a caesarean rate of approximately 36% [1-4].

As in many other parts of the globe, the causes of this high cesarean rate are not fully elucidated, but they appear to be the result of a variety of factors such as *on demand* cesarean and *defensive cesarean*, attributes of an obstetric medicine and medicine in an accelerated expansion after a long period of prohibitions [1-4].

Another well-known fact is that countries do not constantly report data and that global reporting is not only discontinuous but also profoundly flawed by the absence of uniform reporting criteria to the WHO [1-4]. This makes it almost impossible to accurately and scientifically determine the causes and consequences of this variable percent of caesarean section [1], which is why there was more than a need for a language uniformization formula used by experts and professionals in the field, as well as uniformity of reporting rules.

This *common language* is Robson Classification of Caesareal Patients and was proposed as a WHO work tool as early as 2011-2012 but has become an almost mandatory recommendation of this international forum in 2017 [8-13].

Since 2017, a patented tri-lingual (English, Italian, Spanish) implementation textbook - *Robson Classification: Implementation Manual* (ISBN 978-92-4-151319-7) - is available on the WHO website as, in fact, any such important scientific approach should be (Robson Classification: Implementation Manual, Geneva, World Health Organization, 2017, License: CCBY-NC-SA 3.0 IGO) [8-10].

Robson classification is a particularly useful tool for all factors involved in obstetrics, public health and scientific research on birth and caesareans, regardless of the fact that the people involved could be only practitioners, data providers or communicators, or end-users of these data.

Another great advantage of this data storage and reporting system is that it can be applied immediately, anywhere, whether it is a compartment, an obstetric department, a hospital, a city, a state or a continent. It is, in fact, a simple classification of the patients in one of the 10 obstetric categories imagined by Robson.

It is very important to note that the Robson Classification in no way impairs the use of other data systems and can simply be added to any data generation, storage and usage system. It also does not have any effect on personal data or on the management of such data, according to EU regulations.

It does not produce any direct changes or consequences, nor does it impede the cesarean indication in any way. Moreover, the classification of Robson does not change the type or the nature of the cesarean indication at all. It does not classify the caesarean indication or pathology of the patient.

It is, in fact, a simple categorization of patients according to certain *demographic* criteria [8-10]. The reference criteria are 6: the parity, the existence (or inexistence) of the scarring uterus (C-section in the past), the way of obtaining the labor (spontaneous, induced, absence of labor during the cesarean operation), the number of fetuses (unique or twin pregnancy), gestational age (under 37 weeks or over 37 weeks), fetal position and presentation (cephalic flexed, pelvic, cephalic deflected, transverse).

Robson's criterion	Signification
Robson 1	Primiparous, single cephalic, ≥ 37 gestational weeks in spontaneous labor
Robson 2	Primiparous, single cephalic, ≥ 37 gestational weeks in spontaneous labor: • induced labor • C-section before labor
Robson 3	Multiparous (excluding previous C-section), single cephalic presentation, ≥ 37 gestational weeks in spontaneous labor
Robson 4	Multiparous (excluding previous C-section), single cephalic presentation, ≥ 37 gestational weeks in spontaneous labor: • induced labor • C-section before labor
Robson 5	Previous C-section (cicatriceal uterus), single cephalic presentation, ≥ 37 gestational weeks: • spontaneous labor • induced labor • C-section before labor
Robson 6	Primiparous, single pelvian presentation: • spontaneous labor • induced labor • C-section before labor
Robson 7	Multiparous, single pelvian presentation (including previous C-section): • spontaneous labor • induced labor • C-section before labor
Robson 8	Multiple pregnancy (including previous C-section) with: • spontaneous labor • induced labor • C-section before labor
Robson 9	Distocic or oblique presentation (including previous C-section, but exclusive pelvian presentation) with: • spontaneous labor • induced labor • C-section before labor
Robson 10	Single cephalic < 37 gestational weeks (premature), including previous C-section, with: • spontaneous labor • induced labor • C-section before labor

Table 1
ROBSON'S CRITERIA

Thus, regardless of the indication that led to the cesarean, the patient should be assigned to one of the 10 *Categories* or *Groups* Robson [8-10], groups shown in table 1.

Experimental part

Although Romanian obstetricians are obviously fierce opponents of the rules [1-4], we succeeded in implementing in 2018 (without any national or local level legislative norm that would oblige us to do so) Robson's classification in Obstetrics and Gynecology Clinic of the Emergency Clinical Hospital *Sf. Pantelimon* in Bucharest.

Practically, from 1st of January 2018, the Robson Classification became mandatory in this clinic (by an administrative disposition of the head of the clinic) and applied to all caesarean cases, thus supplementing the documents in the patient observation sheet with a form dedicated to this purpose.

In addition to the birth registry of the clinic, since the same date, the Robson category has been computed with an acronym of the type R followed by the number 1 to 10 and the subcategory letter (A, B or C), where is the case (eg: R1 or R6B). None of these measures has in any way influenced the collection, storage or use of patients' personal data.

Obstetricians were previously instructed to complete these data and how the Robson Classification is done, but none of the purposes of introducing this classification into the current practice of the clinic was presented to them, precisely because they should not be influenced by changing practices and personal obstetrical indications.

Results and discussions

Analysis of the data obtained by us showed that of the total of 1223 births (N = 1223) performed at the Obstetrics and Gynecology Clinic of St. Pantelimon in Bucharest, in 2018, a number of 840 (68.68%) were births by caesarean section (a slight decrease from previous years) [1-4] and 383 (31.31%) were vaginal deliveries conducted and / or completed in the clinic. It should be noted from the beginning that we included in the study all the births completed in the clinic in 2018 (January 1st-December 31st inclusive), regardless of the method of birth, and the criterion of the gestational age that defined the birth was that legally considered in Romania, of 24 gestational weeks.

In our study, 840 cesarean births (N=840) were classified according to Robson Classification as shown in table 2. We had 8 caesarean cases for which we did not have enough data to classify them correctly, that was why we excluded them from the study (eg. exact age of

gestation, presence or absence of labor during cesarean, and so on).

If we carefully analyze the data in table 2 we can obviously observe with some *surprise* the following, at least *paradoxical*, realities: the most common category was Robson 1 (226 cases with a single fetus in cranial presentation and spontaneously triggered labor); 2nd place as frequency was Robson 5 (213 cases of cicatriceal uterus after multiple cesarean previously operations, with single fetus in term in cranial presentation); 3rd place as frequency was Robson 9 (95 causes of distocic or oblique presentation other than pelvic - that was, cephalic deflected or transverse); the fourth place as frequency was occupied

by the Robson 3 criterion (70 cases of single fetus in term, cranial presentation and spontaneous labor at women with multiple previous gestations).

The Robson 8 criterion (multiple pregnancy) was the most rarely assigned (only 15 cases = 1.78% of the total C-sections).

The most controversial results were summed up by the criteria that totalize the distocic presentations (Robson 9 = 95 cases = 11.30% of the cesareans performed) and the potentially distocic (pelvian) (Robson 6 and 7, ie another 7.61% of cesareans performed in the clinic in 2018). In other words, almost one in five cases of caesarean section

Table 2

DISTRIBUTION OF CAESAREAN CASES FROM THE OBSTETRICS AND GYNECOLOGY CLINIC OF SF. PANTELIMON EMERGENCY CLINICAL HOSPITAL BUCHAREST IN 2018, ACCORDING TO ROBSON CLASSIFICATION

Robson's criterion	Signification	Number of cases (N)	Percent from total C-sections from clinic	Classification Observations
Robson 1	Primiparous, single cephalic, ≥ 37 gestational weeks in spontaneous labor	226	26,90%	First place (as frequency)
Robson 2	Primiparous, single cephalic, ≥ 37 gestational weeks in spontaneous labor: A. induced labor B. C-section before labor	53 1 52	6.30%	6th place
Robson 3	Multiparous (excluding previous C-section), single cephalic presentation, ≥ 37 gestational weeks in spontaneous labor	70	8.33%	4th place
Robson 4	Multiparous (excluding previous C-section), single cephalic presentation, ≥ 37 gestational weeks in spontaneous labor: A. induced labor B. C-section before labor	28 1 27	3.33%	8th place
Robson 5	Previous C-section (cicatriceal uterus), single cephalic presentation, ≥ 37 gestational weeks: A. spontaneous labor B. induced labor C. C-section before labor	213 212 0 1	25.35%	Second place
Robson 6	Primiparous, single pelvian presentation: A. spontaneous labor B. induced labor C. C-section before labor	44 24 0 20	5.23%	7th place
Robson 7	Multiparous, single pelvian presentation (including previous C-section): A. spontaneous labor B. induced labor C. C-section before labor	20 14 0 6	2.38%	9th place
Robson 8	Multiple pregnancy (including previous C-section) with: A. spontaneous labor B. induced labor C. C-section before labor	15 12 0 3	1.78%	10th place
Robson 9	Distocic or oblique presentation (including previous C-section, but exclusive pelvian presentation) with: A. spontaneous labor B. induced labor C. C-section before labor	95 90 0 5	11.30%	Third place
Robson 10	Single cephalic < 37 gestational weeks (premature), including previous C-section, with: A. spontaneous labor B. induced labor C. C-section before labor	68 28 0 40	8.09%	5th place
Unclassified cases	Incomplete data for classification	8	0.95%	11th place
TOTAL	-	840	100%	-

was indicated for a non-cephalic presentation (159 out of 840 cases, ie 18.91% of caesarean cases).

Another very important remark is that over 255 cases of caesarean section have been done to women with cicatriceal uterus after previous C-sections, so the indication was mainly due to previous cesarean operations.

Conclusions

Thus classified, the patients analyzed by us in the present study have in common an almost obvious trait: the indication for caesarean is, in mostly analyzed cases, at least *questionable*.

The results clearly show an *incredible* incidence of distocic presentation, even if the St. Pantelimon Obstetrics Department is classified as a Grade III (highest) center (resolves the most complicated cases).

In fact, much of the cesareans studied are nothing but cesarean *performed at the request of the patient* (even if this is not legalized in Romania) or defensive C-section" practices by obstetricians to avoid possible litigation.

There is also a good conclusion, that a preventive obstetrics was certainly practiced, avoiding as much as possible distocic presentations of any kind and cause.

However, the *St. Pantelimon* Obstetrical Department is one that reflects quite well the obstetric practices of Romania [1-4], and the mandatory introduction of the Robson Classification in all maternities in the country will generate statistical results very similar to ours.

This is also the reason why we consider it more honest and safer (both for patients and for obstetricians) to legalize cesarean at the patient's explicit request and to avoid "production of indications more or less close to reality (and therefore more or less *verifiable*).

We believe that, at least nowadays, we all sail (equally patients and obstetricians) into *extremely troubled waters*" and, implicitly, dangerous ...

We also believe that the urgent implementation of Robson Classification in maternity hospitals in Romania is not only necessary, but also extremely urgent, being a very

practical tool in determining the causes of certain contemporary obstetrical practices and customs.

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