

Evaluation of Patients' Satisfaction on Epidural Analgesia in Labour in a Tertiary Hospital in Cameroon

Robert Tchounzou^{1,2}, Dominique Djomo Tamchom¹, Félix Adolphe Elong^{2,6}, Theophile Nana Njamen^{2,5}, Alphonse Ngalame Nyong¹, Inna Rakya^{1,7}, Darolles Mwadje Wekam¹, André Gaetan Simo Wambo^{2,4}, Humphry Neng Tatah¹, Diane Estelle Kamdem¹, Moustapha Bilkissou, Julie Ngo Bata¹, Emile T. Mboudou^{1,3}

¹Douala Gynaeco-obstetric and Paediatric Hospital, Douala, Cameroon

²Faculty of Health Sciences, University Buea, Buea, Cameroon

³Faculty of Medicine and Biomedical Sciences, University of Yaounde I, Yaounde, Cameroon

⁴Regional Hospital Limbe, Limbe, Cameroon

⁵Douala General Hospital, Douala, Cameroon

⁶Regional Hospital Buea, Buea, Cameroon

⁷Faculty of Medicine and Biomedical Sciences of Ngaoundere, Garoua, Cameroon

*Corresponding author: Robert Tchounzou, Faculty of Health Sciences, University of Buea, Cameroon, Tel: +237679677966, E-mail: rtchounzou@yahoo.fr

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Abstract

Background: Patient's satisfaction is an important indicator of the quality of health care services. It can be linked both to the outcome of a treatment or intervention or to the perception of the procedure by the patient, especially when this one is newly introduced in the practice as is the epidural anaesthesia in our settings.

Objectives: To measure the satisfaction level of women after epidural analgesia in labour and describe the reasons of dissatisfaction.

Patients and methods: we conducted a cross-sectional retrospective study in the DGOPH. All patients who received epidural analgesia from February 2016 to August 2019 were consented and submitted to a pretested questionnaire. Socio-demographic data were recorded; a modified Likert's scale was used to evaluate the level of satisfaction of respondents.

Results: Eighty-three out of 104 respondents (79.79%) were satisfied with the labour pains' control with 63.56% of them scoring the highest level of satisfaction. The midwives and nurses displayed the best positive feelings (74.03% very satisfied) followed by the obstetricians (68.26%) and anaesthesiologists (55.76%). Twenty-one (20.21%) respondents were not satisfied (6.74%) or fairly satisfied (13.47%) and reasons for non satisfaction included unmet expected level of pain relief, side effects of procedure, poor caregivers-patients relationship and expensiveness.

Conclusion: The overall satisfaction level for EA was high and the best positive feelings were for nurses and midwives. However, certain aspects of care delivery, patient-providers relationship have to be improved to increase the adherence to the procedure.

Keywords: Patients' Satisfaction; Epidural Analgesia; Tertiary Hospital; Cameroon

Introduction

Patients' satisfaction (PS) has long been used as an indicator of health care delivery services over the world [1,2]. PS is usually directly linked to the outcome of the treatment or the procedure carried on the patient but also to the perception of the process of care by the patients [1,3]. This applies to medical, surgical and other types of health care services or interventions and more especially when this is a new approach or an innovative aspect of care like labour pains analgesia [1,3] in our settings. In fact vaginal delivery results from labour which is a period of mixed feelings for women, with the excitement of having their newborn baby and the fear of painful labour experience [4,5]. Many women perceive labour pains as very severe in Europe and USA and express need for pains relief [6]. Labour pains can be controlled by many ways including continuous psychological support, non pharmacological methods, use of parenteral analgesics and epidural anesthesia (EA). The best pharmacological method of pain relief is neuraxial anaesthesia (epidural or combined epidural and spinal anaesthesia). More than 70% of women in Europe and USA benefit from this type of anaesthesia and express great level of satisfaction after [6]. African women have long been considered as more resistant to labour pains or able to develop several mechanisms to cope with labour experiences. But this assertion remains anecdotal as recent studies in Nigeria and other sub-Saharan African countries report that increasing numbers of African women express desire of satisfactory pain control during labour [7,8]. Very few maternities so far in low income countries offer EA to parturient. In Cameroon, this procedure is reported to be reserved to specific categories of patients like Pregnant women with sickle cell disease (SCD), cardiac diseases in pregnancy or for those who make special request for it [9]. Tertiary hospitals in Cameroon are gradually integrating labour analgesia in their protocols of obstetric care to offer better experiences to parturient. But to the best of our knowledge no study exists on the evaluation of the satisfaction of women after the process. Yet, understanding women perception of care and satisfaction enhances the utilization of health care services or procedures [10].

We thus designed this study to evaluate the overall satisfaction of women who delivered under epidural anaesthesia in Douala Gynaeco-obstetric and Paediatric hospital (DGOPH). The reasons of non satisfaction were also assessed.

Patients and Methods

We carried a cross-sectional *descriptive* study at the Douala Gynaeco-obstetric and Paediatric Hospital (DGOHP)

from February 2016 to August 2019. DGOPH is a tertiary hospital put to service in August with a triple mission of offering high quality care to Cameroonian women and infants, contributing to training of medical doctors and other health personnel categories and carrying clinical research. During the period of study, a mean number of 55 deliveries per month were conducted; the hospital had 10 obstetrician and gynaecologists, 3 anaesthesiologists among other specialists. Among others, this health facility offers obstetric care to both low risk and high risk pregnant women including deliveries under epidural anaesthesia (EA). From the opening of the maternity unit, EA is gradually introduced in the protocol of delivery in a bit to assist parturient cope with labour pains. The protocol of analgesia put in place by anaesthetists is "patient-controlled epidural analgesia" (PCEA): a mixture of Bupivacaine 0.125% (1.25 milligram/millilitre) and Fentanyl 1.66 microgram/millilitre is prepared. A bolus of 5 ml is injected at the site L4-L5 or L3-L4 at 3-4 cm of dilatation and efficient uterine contractions which is repeated after 10 minutes (min) if needed. A maintenance dose is administered continuously using an electric syringe; the initial speed of administration depends on the parturient's weight and is modulated and adjusted using the Bromage's score to reach a sensitive block.

All patients who received EA during the study period were consented and conveniently included in the study. Socio-demographic, obstetric and general information were extracted from patients' file. A questionnaire was administered to selected participants on the following aspects: previous delivery under EA, the time she was proposed EA, the obstetrician care (explanation on EA and side effects, counselling), the anaesthetist and midwifery care. We used a modified Likert's scale to score respondents satisfaction on obstetrician, nursing and anaesthetic aspects of care, and the control of labour pains. The retained score scale was as follow: 0-4 = not satisfied at all, 5-6= fairly satisfied, 7-8 = rather satisfied, 9-10= very satisfied. Respondents were also asked to evaluate the cost of the procedure, the readiness to accept EA in future pregnancy. Patients with incomplete file or who refused to answer all or part of the questionnaire were excluded from the study.

Data were entered in excel 2010. Only descriptive statistics were done.

Results

106 files were examined out of which 104 (98.11%) were selected for the study. 2 files were excluded for incomplete data. All the 104 selected women responded to all sections of the questionnaire.

Table 1: Socio-demographic characteristics of respondents
Socio-demographic characteristics of respondents

Age distribution (n=104)		
Age group (yrs)	Proportion	Percentage (%)
<25	03	2.89
25-29	23	22.12
30-34	38	36.53
35-39	21	20.20
40-44	19	18.26
Profession (n= 104)		
Profession	Proportion	Percentage (%)
Unemployed	06	5.76
Student	15	14.42
Civil servant	48	46.16
Private salary	12	11.54
Self employed	23	22.12
Marital status (n= 104)		
Marital status	Proportion	Percentage (%)
Married	74	71.0
Single	30	29.0

As shown in Table 1, the majority of the study participants belonged to the age group of 30-34 years with the extreme of 20 and 44 years. 7.1% were married and the majority (79.82%) were employed.

79.79% of study participants were satisfied with the labour pains' control with 63.56% of them scoring the highest level of satisfaction (Table 3). The greatest level of satisfaction was expressed for nursing care while the anaesthetists scored the lowest score of satisfaction.

Twenty-one patients (20.21%) expressed overall dissatisfaction about the procedure, with 7(6.74%) of them declining total dissatisfaction. Reasons for dissatisfaction included the cost of the EA which was found to be very expensive by 13 respondents (12.5%) and expensive by 30 (28.85%) (Table 2), side effects, failure to reduce the pains, and the delivery through caesarean section.

Table 2: Obstetric characteristic of respondents and cost of procedure

	Frequency (n=104)	Percentage (%)
Mode of delivery		
Vaginal delivery	94	90.38
Cesarean section	10	9.62
Side effects		
yes	8	7.70
No	96	92.30
Cost of procedure		
acceptable	61	58.65
expensive	30	28.85
Very expensive	13	12.5

Table 3: Distribution of Satisfaction score

Score	Obstetricians	Anaesthetists	Nursing	Overall
Not satisfied	–	–	–	7(6.74%)
Score	Obstetricians	Anaesthetists	Nursing	Overall
Fairly satisfied	7(6.74%)	14 (13.47%)	7(6.74%)	14 (13.47%)
Rather satisfied	26 (25%)	32 (30.76%)	20(19.23%)	20 (19.23%)
Very satisfied	71(68.26%)	58 (55.76%)	77 (74.03%)	63 (60.56%)
Total	100	100	100	100

Seventy-seven respondents (74.04%) expressed their readiness to accept Epidural analgesia in future labour, 10 (9.62%) said they will not accept and 17 (16.34%) didn't know whether they will accept or not (Table 4).

Table 4: Distribution of respondents according to readiness to accept EA in future

Attitude in future	Number (n= 104)	Percentage (%)
Ready to accept	77	74.04
Not ready to accept	10	9.62
Undecided	17	16.34

Discussion

Our study took place in a tertiary hospital (or category 1, highest in the hierarchy) where the costs of procedures are relatively high compared to other levels of care. In that light it is understandable that the majority of the respondents had an income generating profession or a salary (79.82%), and 71% were married.

Overall patients'satisfaction.

Sixty-three (60.56%) of study respondents expressed total satisfaction (very satisfied) and 20 (19.23%) were satisfied thus an overall satisfaction rate of 79.79%. This is similar to the rate reported by Yurashevish M, B. Carvalho and coll. Who described a 78% of total satisfaction [11]. In the contrary, Daryl Jian et al. in Singapore found respectively 35.9% of very satisfied and 32.2% of satisfied patients [12], Jefferson Clivatti et al. [13] and E. Gredilla et al. in Spain [14] on their parts reported an overall satisfaction rate of 92% and 91.3% respectively. Respondents expressed different levels of positive or negative feelings according to various categories of workers.

Satisfaction with nursing (Midwives and nurses)

Amongst the caregivers, the respondents expressed the highest score of satisfaction with nurses and Midwives (91.26%, 74.03% of very satisfied). In fact, the job description of this category of workers comprise amongst others to counsel patients, to administer treatment, to monitor labour and EA procedure and bring constant support to labouring women. Patients' satisfaction

is driven by several factors including good worker-patient relationship, courtesy, non abuse behaviour, respect of patients' opinion, "making patients feel as humans" [10,13]. We thus attribute the positive views of respondents to these health care workers categories to their skilled attitudes in reassuring patients and making them feel secured and comfortable.

Satisfaction with obstetricians

Ninety-seven women (93.26%) expressed satisfaction with obstetricians' care with 68.26% of them being very satisfied. We attribute this to the ability of the obstetricians to provide information on EA (including procedure and side effects), to encourage patients to participate in decision-making, to anticipate on childbirth outcomes [13].

Satisfaction with anaesthetists

The anaesthetists whose jobs were to place the epidural anaesthesia sets, to choose the technique of drug administration have the least positive feelings from respondents (86.52% satisfaction score with 55.76% of women very satisfied). *The ratio of patient to anaesthesiologists was high as the Hospital has only 3 anaesthesiologists responsible to conduct surgical interventions, care of patients in intensive care units and EA and this could reduce the face-to-face contact with labouring women receiving EA.* Furthermore, PCEA which was used during our study has been reported in literature as efficient but not the best by many authors [14,15]. Several regimens of analgesia administration exist including

- a) Conventional midwife or anaesthetist low dose top-ups where bolus of local anaesthesia with Bupivacaine is administered at patient's request or at timed interval;
- b) Low dose top-ups where boluses of Fentanyl are infused at regular intervals and
- c) Epidural anaesthetic infusions with 8-16 ml/hour of anaesthetics delivered to patients.

The regimen used in our maternity is the midwife top-ups which appears to provide the least satisfaction compared to the two others [15]. Regimens using Ropivacaine plus Fentanyl produces less motor block (side effect) than Bupivacaine + Fentanyl which was used by our anaesthetists [16].

Reasons for dissatisfaction

Seven respondents (6.74%) expressed total dissatisfaction and 14 others were only fairly satisfied with EA. Reasons

mentioned to explain dissatisfaction were insufficient reduction of labour pains, side effects of the procedure (Back pains, post procedure headache and in one case temporal lower limbs hemiplegia), and cost of the procedure. Determinants of dissatisfaction about EA have been described in literature [14,19,20] and side effects, level of analgesia obtained are important benchmarks but Richardson MG also demonstrated the role of factors different from analgesia alone [19]. Our study participants mentioned the caesarean mode of delivery as reason of non satisfaction, same together with other adverse materno-foetal outcomes were identified as determinants of dissatisfaction [10]; other reasons were unmet expectations, poor caregivers-patients interaction and cost of procedure [2].

Cost of procedure

Thirteen respondents (12.5%) and 30(28.85%) found the procedure to be very expensive and expensive respectively (see table 2). The cost of EA at the DGOPH is between 80000 and 90000 Francs CFA (122 to 138 Euro), this was a cause of dissatisfaction in spite of the fact that up to 79.82% of the study population had an income generating employment or a salary. The cost of access to a treatment has long been described like a cause of non satisfaction and an obstacle for the utilization of health services [2,10].

Readiness to accept EA in future labour

Only 74.04% of study participants expressed their readiness to accept EA in future labour. The gap between the number of those who expressed overall satisfaction and this figure may indicate that the satisfaction score was not well evaluated. This flaw point and some other limitations due to the retrospective nature of the study shall be considered when designing future surveys.

Conclusion

Overall satisfaction level was high for epidural analgesia in our study and nurses and midwives displayed the highest score of satisfaction. However, reasons for dissatisfaction or insufficient satisfaction include unmet expected level of analgesia, poor caregivers-patients interaction and cost of the procedure. These weak points must be focused at to increase the adherence of women to epidural anaesthesia which is relatively new in our settings.

Competing Interests

Authors declare no competing interests.

Authors' Contribution

Robert Tchounzou, Dominique Tamchom Djomo and Félix Adolphe Elong designed and wrote the manuscript. Robert Tchounzou, Inna Rakya, Humphry Tatah Neng, Alphonse Nyong Ngalame, Darolles Mwadjie Wekam, Diane Estelle Kamdem, Théophile Nana Njamen, Julie Ngo Bata, Bilkissou Moustapha, André Gaetan Simo Wambo participated in data collection and revised the manuscript. Emile T. Mboudou supervised the manuscript writing. All the authors read and approved the final version of the manuscript.

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