

Nurses Knowledge Regarding Care of Pregnant Woman with Late Ante partum Hemorrhage in Obstetrics and Gynecological Military Hospital, Sudan

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Abstract

Background: Hemorrhage during the antepartum period is a life-threatening emergency for mother and/or fetus. Late antepartum hemorrhage is a serious complication of pregnancy occurring within the third trimester associated with an increased risk of postpartum hemorrhage (PPH), anemia, shock, low birth weight, intrauterine fetal death (IUFD), and birth asphyxia. **Main objective:** To assess nurses' knowledge regarding care of pregnancy women with late ante partum hemorrhage. **Specific objectives:** To identify study group knowledge regarding disease process: definition, classification, etiology, path

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physiology, clinical manifestations, investigation, complication, and medication, affects the APH on pregnancy and risk factors. To find out the association between the knowledge score in relation to demographic variables among study group. **Methods:** This is descriptive study on hospital based used was utilized to fulfill the aim of the study and conducted in period from February 2021 _July 2021. A convenient sample of all nurses who are working in the antenatal wards (57 nurses) were included in the present study. The tool was used for data collection: standardized structured questionnaire consists two parts; Part 1: Socio demographic characteristics of the study group: includes (age, educational level, years of experience and previous training course). Part 2: knowledge regarding information about disease, risk factors and nursing management. The data was analyzed by (SPSS) program version 24 with (mean, standard deviation, T. test chi square test and cut off P value).

Ethical consideration: Approval was obtained from karary University and then an official permission to conduct the study was obtained from the responsible administration of the healthy services that was taken and delivered to the direct obstetrics and gynecology military hospital in order to obtain their agreement to conduct the study after explaining its purpose.

Results: the results were revealed that the study had more Knowledgeable in pointed of definition which reached score very good 33(58.9%) it was highly statistically significant ($p=0.000$), And on other side the majority of study group had inadequate knowledge in statement of (incidence, classifications, complications, medications, investigation) were attain score poor level ranging between 91% ,50%,58.9%,56.7% ,53.6% respectively, and stander deviation in all items less than one indicates statistical insignificant, regarding association between nursing management of pregnant woman with late APH among staff nurses and selected demographic variables such as, qualification, , duration of experience and training course in-services. The findings were revealed there was insignificant statistically between nurses' knowledge score and demographic variables, probability value of Chi-Square test (07140,399, 0.677.) respectively t higher than significance level (0.05). (p value $> .05$) was a negative association.

Conclusion: The study concludes that the nurses who are participated in the study were more knowledge in some variables have achievable maximum score level in pointed of definition of late anti partum hemorrhage. On the other hand, the study group had adequate knowledge the maximum deficit was found in statement of incidence of ante partum hemorrhage

and definition of abruption placentae. Finally, the overall knowledge scores obtained by the staff nurses, the majority more than three quarters had poor knowledge which reach (68.9%)

Key word: Late ante partum hemorrhage (LAPH), knowledge, nurses and results.

Introduction

Ante partum hemorrhage (APH) defined as bleeding from the genital tract after 24 weeks of gestation or fetus weight 500g, considering viability of the baby and has an incidence of 2–5% of all pregnancies beyond 24 weeks. The causes of antepartum hemorrhage range from cervicitis to placental abnormalities⁽¹⁾. Throughout pregnancy antepartum hemorrhage can cause adverse maternal, fetal and neonatal outcomes. Although vaginal bleeding during the late half, it complicates approximately 5% of pregnancies.⁽²⁾ Worldwide approximately 830 women die every day from preventable causes related to pregnancy and childbirth; 99% of these maternal deaths occur in developing countries. Direct obstetrical complications are the main causes of maternal deaths with bleeding.⁽³⁾ The total number of maternal deaths (MD) in Sudan from obstetrical hemorrhage during period 2012 to 2019 years were 2933 out of 11000 MD, it was main direct causes of MD⁽⁴⁾. Antepartum

hemorrhage is bleeding at the decidua-placental interface that causes partial or total placental detachment prior to delivery of the fetus over 20 weeks of gestation⁽⁵⁾. In Burkina Faso maternal mortality remains high, with 2,700 deaths per 100,000 deliveries. Hemorrhage is the leading cause of maternal mortality globally, accounting for approximately 27% of deaths worldwide. In developed countries hemorrhage prior to delivery accounts for only 16.3% of maternal deaths, while Sub-Saharan Africa remains high at 24.5%. In France serious obstetrical hemorrhage (SOH) represented 19% of admissions to the Intensive Care Unit (ICU)⁽³⁾. The findings of the World Health Organization (WHO) meta-analysis show that the foremost important direct causes of maternal deaths are, namely: hemorrhage (27%), abortion, and sepsis (14%) and hypertension (11%)⁽⁶⁾. The major causes of late antepartum hemorrhage include abruptio placenta and placenta previa. Vaginal bleeding is a common presenting complaint to emergency departments, and especially to an obstetric triage unit. Quick and details evaluation of vaginal bleeding during pregnancy in the acute setting is crucial to overall maternal and fetal well-being. This review will focus on the major causes of vaginal bleeding in the second and third trimester, specifically beyond viability as well as the approach to diagnosis and

management.⁽²⁾ .Study done in Yalgado Ouedraogo Hospital, Ouagadougou, Burkina Faso, to evaluate incidence and outcomes of Severe Ante Partum Hemorrhage (SAPH) during the study 7,469 women were admitted in obstetrics and 122 cases of SAPH were recorded. SAPH represented 1.6% (n = 122) of hospitalizations causes and 14.5% (n = 1083) of hemorrhages during pregnancy. Complications were observed in 80.3% (n = 98) , 118 maternal deaths were reported of which 15.6% (n = 19) related to SAPH majority (n = 16; 82.6%,) had severe anemia Ten women (8.19%) were admitted in (ICU).and Uterine Rupture (UR) (p = 0.002) were associated with poor outcome.⁽³⁾

Study carry out in Brazil regarding maternal mortality due to obstetrical hemorrhage during the research period, 22,281 maternal deaths were identified, among which 3,179 were due to hemorrhage, accounting for 14.26% of the total deaths.⁽⁷⁾ .Conducted study on obstetric danger signs. carried out among antenatal care clients at Kenya National Hospital. According to this study, Haemorrhage was the most known danger sign in pregnancy mentioned by 64.2% of the respondents, followed by reduced foetal movement which was mentioned by 20.6% of the respondents.⁽⁸⁾ .Other study conducted the maternal morbidity due to massive obstetric haemorrhage in Pune, Maharashtra

noticed that in 66 percent of cases, massive obstetric haemorrhage occurred in late pregnancy, in 18 percent of cases in early pregnancy and in 16 percent of the cases it was after delivery. There were major complications in 43 percent of the cases. Hypovolemic shock occurred in 53.5 percent of the cases. ⁽⁸⁾ A survey study on maternal health problems in rural Machinji district of Malabi. Among 3171 women most commonly identified maternal health problems are anemia 87%, antepartum hemorrhage 70%, postpartum hemorrhage 70%, pre-eclampsia 56%, obstructed labor 70%. ⁽⁹⁾ WHO statistics shows 3% of hospital consultant episodes for antepartum hemorrhage required emergency hospital admission in England. 28 was the main age of patients hospitalized for antepartum hemorrhage in England. 3 A survey study on antepartum hemorrhage conducted in USA shows that antepartum hemorrhage occurs in 2% of pregnancies and is an important cause of maternal death. ⁽⁹⁾ India is among those countries which have a very high maternal mortality rate. In the year 2000 maternal mortality rate for India was 407/100000 live births. The major causes of maternal mortality were antenatal and postnatal hemorrhage. In Karnataka 2-3% of antenatal mothers suffering with antepartum hemorrhage. ⁽⁹⁾

Nursing management: Nurses play a vital role in antenatal care, clinical assessment, critical thinking, decision making, appropriate preparation and good emergency obstetric care and resource allocation must be quick and appropriate to increase the likelihood of positive outcome of late ante partum hemorrhage for mother, fetus and neonate as well as reducing mortality and morbidity. The immediate management of late ante partum hemorrhage start with the women admission to the hospital, the nurse begins with an assessment of the bleeding, take necessary history such as gravidity, parity, EDD, general status, bleeding (quantity, precipitating event, and associated pain), assess the vital signs and fetal status, abdominal examination to assess fundal level. Laboratory studies include CBC, determination of blood type and Rh factor, coagulation profile, possible type and cross match for 2 packed red blood cells if needed.⁽¹⁰⁾ Significant of the study nurses are frontline health care provider and play important role in early detection of high risk factors of APH. multifaceted with responsibilities to improve woman health decrease morbidity and saving mother life. In addition maternity nurses play important role to ensure the safety of the mother and her baby during all phases of pregnancy and delivery.⁽¹¹⁾

Nurse care planning for a client with prenatal hemorrhage include assess maternal/fetal condition, maintain circulatory fluid volume, assist with efforts to nurture the pregnancy, if possible, avoid complications, provide emotional support to the client/couple, and provide knowledge on short- and long-term complications of the hemorrhage. ⁽¹²⁾

Maintaining Tissue Perfusion, Fluid Volume: Evaluate amount of bleeding by weighing all pads. Monitor CBC results and vital signs. Position in the left lateral position, with the head elevated to enhance placental perfusion. Administer oxygen through by face mask at 8 to 12 L/minute. Maintain oxygen saturation level by using pulse oximetry monitoring. Establish and maintain large-bore I.V. line for fluids and blood products as prescribed. Assess maternal physiological circulatory status and blood volume. Note expected date of birth (EDB) and fundal height Evaluate fetal status with continuous external fetal monitoring. Prepare for possible cesarean delivery if maternal or fetal compromise is evident. ^{(13), (14)}. **Relieve pain by:** Monitor nature, severity, location, and duration of pain. Assess for uterine contractions, retroplacental hemorrhage, or abdominal tenderness. Educate client about the condition and treatment. Encourage expression of concerns. Administer narcotics or sedatives as prescribed. **Decreasing Fear ;** Through inform the

woman and her family about the status of herself and the fetus Explain all procedures in advance when possible or as they are performed. Involve client in planning and participating in care as much as possible. ⁽¹²⁾

Increasing Knowledge: Explain prescribed treatment and rationale for the hemorrhagic condition. Reinforce information provided by other healthcare providers. Discuss possible short-term maternal/fetal implications of bleeding episode. ^{(12), (14)}

Methodology

Descriptive study on hospital based to assess nurse's knowledge regarding care of pregnant women with late anti partum hemorrhage was carried out in Obstetrics and Gynecology Military Hospital in antenatal, received pregnant women who have medical disorders and obstetric conditions, covered by nursing staff who work three shifts the most have permanent job. The study period was four months started from 21february 2021 –8 Jun 2021. The study group which include nurses who work in obstetrics and gynecology military hospital and their number is (57) nurses have BSc degree and diploma holders with experience more than one. Convenient sample was used of total coverage of nurses who working in obstetrics and gynecology military hospital during three shifts and to fulfill the above criteria

Variables under study: Independent: Sociodemographic characteristics. Related to age, educational level, years of experience and training course attended **Dependent–:** Study group knowledge regarding definition, incidence, classifications, etiology, pathophysiology, causes, risk factor, clinical manifestations, investigations, medications, effect of anti-partum hemorrhage on pregnancy, complications, health teaching of pregnant women about (, diet, activities and position), medical and nursing management of late anti partum hemorrhage

The tool was utilized for data collection. Designed by the researcher's reference to the scientific objectives and based on related literature, tested by a pilot study for validity.

Standardize Structured questionnaire was split in two sections consists list of study variables with closed-ended questions: **Part one** four questions related to socio demographic characteristics of the study nurses. **Part two:** study group knowledge regarding nursing management on APH.

Rating Scale :(12),(13) Assess knowledge questions by scoring system (item four-points Likert scale), total score were 100 degree Correct & complete answers (score 4 V good), Correct and incomplete answers (score 3 good, 2 fair), didn't know (score 1). . The scores of total knowledge was considered

as more than (60%) was adequate and less than (60%) was in adequate

Ethical consideration: –Approval was obtained from Karary University and then an official Permission to conduct the study was obtained from the responsible administration of the of Health Services that was taken and delivered to the director Obstetrics and Gynecology military Hospital in order to obtain their agreement to conduct the study after explaining its purpose. Verbal consent was taken from all the participants in study The purpose of the study was explained to all the participants and the assure them all the data was collected to be remain confidentially throughout the study and were accessed only by the investigator and also They were informed that they had right withdraw from the study at any time if they wish

Data analysis: – Data was analyzed using Microsoft excel for computation of descriptive statistics frequency and percentage were calculated for quantitative data. Mean and standard deviation were presented in qualitative variable, Chi a square test was used to test Level of significant. Based on the results, found statistically significant test ($p<.0.05$). Positive correlation in some items.

Results (summarized): Table (1). Shows the distribution of the study group according to their socio-demographic characteristics: related to age more than half of study group 55.4% those their group 20--25 years,. Regarding level of education among study group the majority of them more than half 32 out of 57 nurses (57.1%) have BSc degree, while the minority of them 42.9% of the nurses had diploma holders. Concerning their year of experience was noticed that more than two third of study group 60.7% (1—4year),. In training in-service attendance most of nurses 51.8% did not receive any training program regarding nursing care of woman with late ante partum hemorrhage,

Table (2) In this table the main results represented three quarter of nurses had poor knowledge concerning nursing management to pregnancy with APH the score in variables of nursing advice regarding vaginal bleeding 34(60.7%) and diet program,39 (69.6%) out of 57nurses Also more than half of study group were obtainable 32 (57.1%) regarding nursing assessment of fetal will being and nursing advice to the pregnant mother with late anti partum hemorrhage to lying on left lateral position , 29(51.8%) the criteria which how estimating of blood loss

Table (3). the study had more Knowledgeable in pointed of definition which reached score very good 33(58.9%) it was highly statistical significant ($p.0.000$), And on other side the majority of study group had inadequate knowledge in statement of (incidence, classifications, complications, medications, investigation) were attain score poor level ranging between 91% ,50%,58.9%,56.7% ,53.6% respectively

Table (4). Describes the relationship between the knowledge scores regarding nursing management of pregnant woman with late APH among staff nurses and selected demographic variables such as,, qualification, , duration of experience and training course in-services. Test by correlation using Chi-Square test The findings revealed there was insignificant statistically between variables, p value of ($.399, 0.677.$) respectively than ($p \text{ value} > .05$)

Table (5). Table represents the overall knowledge scores obtained by the staff nurses, the majority more than three quarters had poor knowledge which reach (68.9%)

Table (4-1) Distribution of the study group according to general knowledge regarding the late ante partum hemorrhage (N=57)

Items	Mean	Standard deviation	Correct & Complete Answers		Correct & Incomplete Answers								P-value
			Very-good		Good		Fair		Poor				
			F	%	F	%	F	%	F	%			
1 Definition of late ante partum hemorrhage	2.91	1.352	3	58.9%	-	-	8	14.3%	15	26.8%	027		
2 Incidence of ante partum hemorrhage	1.14	.483	-	--	3	5.4%	2	3.6%	51	91%	.000		
3 Classifications of ante partum hemorrhage	1.80	.961	4	7.1%	9	16.1%	15	26.8%	28	50%	.000		
4 Complications regarding late ante partum hemorrhage	1.70	.952	3	5.4%	10	17.9%	10	17.9%	33	58.9%	.000		
5 The medications use in ante partum hemorrhage	1.80	.980	6	9.1%	6	9.7%	5	7.5%	39	56.7%	.000		
6 Investigations routing done	1.79	.967	7	12.5%	6	10.7%	13	23.3%	30	53.6%	.000		

Table (4-2) Distribution of the Study group according to knowledge about nursing care of pregnant women with APH (n=57)

Items	Knowledge variables	Mean	Standard deviation	Correct& Complete Answers		Correct& Incomplete Answers						P-value
				Very-good		Good		Fair		Poor		
				F	%	F	%	F	%	F	%	
1	Nursing management in patient with emergency case with late anti partum hemorrhage	2.14	1.212	13	23.2%	6	10.7%	13	23.2%	24	42.9%	.032
2	Criteria regarding estimating of blood loss	1.93	1.248	13	23.2%	2	3.6%	9	16.1%	32	57.1%	.001
3	Nursing assessment the fetal will being of the mother with anti partum hemorrhage	1.84	1.156	10	17.9%	3	5.4%	11	19.6%	33	57.1%	.000
4	Nursing management for patient with obstetric shock due massive bleeding	2.29	1.246	14	25%	11	19.6%	8	14.3%	23	41.1%	.000

5	Nursing advice to the pregnant mother with late anti partum hemorrhage to lying on left lateral position	175 .75	406. 290	1 5	26.8 %	7	12.5 %	5	8.9%	2 9	51.8 %	.20 4
6	Nursing advice given to mother with vaginal bleeding	2.1 4	1.31 3	8	14.3 %	6	10.7 %	8	14.3 %	3 4	60.7 %	.04 7
7	Nursing advice is given to pregnant woman with anti partum hemorrhage regarding diet program	1.9 6	1.22 0	6	10.7 %	2	3.6%	9	16.1 %	3 9	69.6 %	.00 2
8	The situation in which normal vaginal delivery is possible	1.5 5	.989	1 1	19.6 %	7	12.5 %	7	12.5 %	3 1	55.4 %	.00 0

Table (4- 3): Association between the knowledge scores with demographic variables of the study group

			knowledge			Total	P value
			good	Moderate	poor		
Age	20_25 y	Count	4	8	19	31	.658
		% of Total	7.1%	14.3%	33.9%	55.4%	
	26_31 y	Count	1	2	6	9	
		% of Total	1.8%	3.6%	10.7%	16.1%	
	32_37 y	Count	3	2	5	10	
		% of Total	5.4%	3.6%	8.9%	17.9%	
	More than 37 y	Count	2	0	4	6	
		% of Total	3.6%	0.0%	7.1%	10.7%	
Total		Count	10	12	34	56	
		% of Total	17.9%	21.4%	60.7%	100.0%	
			Knowledge			Total	P value
			good	Moderate	poor		
Education level	BSc degree	Count	5	8	19	32	.714
		% of Total	8.9%	14.3%	33.9%	57.1%	
	Diploma holder	Count	5	4	15	24	
		% of Total	8.9%	7.1%	26.8%	42.9%	
Total		Count	10	12	34	56	
		% of Total	17.9%	21.4%	60.7%	100.0%	
			knowledge			Total	P value
			good	Moderate	poor		
Years of experience	1_4 y	Count	5	9	20	34	.399
		% of Total	8.9%	16.1%	35.7%	60.7%	
	5_9 y	Count	0	2	3	5	
		% of Total	0.0%	3.6%	5.4%	8.9%	
	10_15 y	Count	3	1	5	9	
		% of Total	5.4%	1.8%	8.9%	16.1%	
	> 15 y	Count	2	0	6	8	
		% of Total	3.6%	0.0%	10.7%	14.3%	
Total		Count	10	12	34	56	
		% of Total	17.9%	21.4%	60.7%	100.0%	

			knowledge			Total	P value
			good	moderate	poor		
Training courses	Yeas	Count	6	5	16	27	.677
		% of Total	10.7%	8.9%	28.6%	48.2%	
	No	Count	4	7	18	29	
		% of Total	7.1%	12.5%	32.1%	51.8%	
Total		Count	10	12	34	56	
		% of Total	17.9%	21.4%	60.7%	100.0%	

Table (4-4): Distribution the total scores of nurses Knowledge regarding nursing care of pregnant woman with APH

Score	Frequency	Percentage
Poor	39	68.5%
Fair	6	10.5%
Good	6	10.5%
Very good	6	10.5%
Total	57	100%

Discussion

Obstetric hemorrhage remains one of the main causes of death in developing countries and is cause of up to 50% of the estimate 500/000 maternal death that occur globally each year. Nurses are the person who play a vital role in maintenance of health care as well as in the Management of APH, improving maternity Nurse performance is extremely important and will be crucial in controlling blood loss reducing the maternal morbidity or even death. ⁽⁶⁾

Regarding training course attendance about care of APH (48.2%) of the study group have received and (51.8) did not receive any training 'in this point is essential that a nurse keep his Knowledge up to date by taking further continual education or refreshing course where appropriate that continuous education can play vital role in improving nurse's knowledge thus improve care of women with LAPH. Receiving previous training program for APH significantly affected the performance level of the studied nurses however nurses who had previous training program had significantly higher mean knowledge score compared to those who did not have training courses This finding cross ponding with (Emam A).⁽⁶⁾ it report that the study group attended APH refreshing training course (40.7) and report (87.5) did not receive training programs. also similar to previous

results done by (. Gad-Elrab).⁽¹⁷⁾ found that around nearly three fifths of them attend training courses.

In this study the result revealed the mean score of Knowledge has more in point of definition of APH which reached (33) 58.9% answering the question correctly it is highly statistically significant (p. 0.027). That mean the nurses well be knowledgeable regarding disease process to expand their knowledge base so that they can identify pregnant women with APH who then can be managed the appropriately, this finding disagree with (Emam A).⁽⁶⁾ reported 45 (70.3%) out of 64 of nurses answering incorrect.

On the other hand the total mean scores of study group knowledge concerning incidence 'classification' complication' medication and investigation of APH 'it was found that more than half did not know the correct answer we achieved poor level (51)91%' (28)50% '(39) 56.7%'(33)58.9%'(30)53.6% for each question respectively theses lack of knowledge may be related to their education level 42.9% of them had diploma holders and majority of study group did not receive training course. In these points the Nurse should be knowledgeable to save mother and new born live this finding was agreement with (Emam A)⁽⁶⁾ she point out that'majority of the Nurses staff had inadequate knowledge regarding theses aspects.

The current study group concerning their knowledge regarding nursing management to pregnancy with APH the results reveal that about one quarter was achieve score v good in items regarding nursing management in patient with emergency case13 (23.2%), estimated of blood loss13 (23.2%), care of obstetric shock due massive bleeding14 (25%), nursing advice regarding lying on left lateral position15 (26.8%). Despite of three quarter which reached poor level score 34(60.7%),39 (69.6%) in variables of nursing advice regarding vaginal bleeding, diet program respectively. Also, more than half of study group were obtainable mean score (1.84) regarding nursing assessment of fetal will being, (1.55) the situation in which normal vaginal delivery is possible. Nursing knowledge about nursing care of pregnant women with APH which show the overall knowledge scores obtained by the staff nurses, the majority had poor knowledge which reach maximum point to fulfill (69.6%) regarding nursing advice is given to pregnant woman with anti-partum hemorrhage about diet program. Indicated that the study group had lack of knowledge which due to absence of protocol guidance related nursing management with pregnant women with APH.. The maternity nurses play a crucial role in mother monitoring and early detection of high-risk pregnancy. for protect and management the safety of the

mother and the fetus throughout the testing period The nurses role is that of accurate assessment and communication when detecting the first sign of hypertension and provide good nursing care of pregnant women including a sound knowledge base to promote nursing practice for meet there needs and enhancing care to reduce maternal and fetal complications, sufficient nursing care and good education of the pregnant women with APH about diet and what the elements containing it based on (health dietary approach) to be emphasize for fulfilling the improvement of a woman and her fetal condition and in carriage lateral recumbent position because this position facilitate venous return, increasing the circulatory volume, which increase renal blood flow and increase placenta bed perfusion which promote fetal wellbeing.

This result is supported by many authors (Gad–Elrab⁽¹⁷⁾, Emam A⁽⁶⁾, Abdelhakm E.⁽¹⁶⁾). The results of the studies demonstrated that the staff nurse had inadequate knowledge regarding care for women with Antipartum hemorrhage which reach 83 %, 90% 82,4% respectively from all study group . on other side results of study done by (pojaSoni, kolpanamonadal.⁽⁹⁾) show that nurses have adequate knowledge and skill

Conclusion

The conclusion drawn from the study based on finding:

The study concludes that the nurses who are participated in the study were more knowledge in some variables have achievable maximum score level in pointed of definition of late anti partum hemorrhage. On the other hand, the study group had adequate knowledge the maximum deficit was found in statement of incidence of ante partum hemorrhage and definition of abruption placentae. Finally, the overall knowledge scores obtained by the staff nurses, the majority more than three quarters had poor knowledge which reach (68.9%)

Recommendations

In the high light of the findings, these recommendations were suggested: –

- 1- Encourage nurses to attend continuing education in the form of workshops, conference and review update nursing care related to management late APH.
- 2- Providing maternity nurses in obstetrics and gynecology departments with an instructional protocols and booklet regarding management of late APH to enhance their knowledge
- 3- Further study is needed to evaluate the reapplication of this study on another Setting and on large sample size to confirm these findings.

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