



Prevalence and Pattern of Dermatoses During Pregnancy

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Key words:

Pruritic urticarial papules and plaques of pregnancy (PUPPP), Pruritic folliculitis of pregnancy (PFP), Prurigo gravidarum (PG), Papular dermatoses of pregnancy (PD), Herpes gestationis, impetigo herpetiformis, Prurigo of pregnancy (Besiner)

Abstract

Background: Pregnancy is a physiological status of a woman. Every organ is adapting in order to accept another human body. Many skin changes during pregnancy are considered to be normal or physiological but few dermatoses occurring in pregnancy may severely affect the mother as well as the fetus. Early diagnosis and treatment may help to reduce morbidity and mortality to the gravid patient and her fetus and minimize fetal exposure to unnecessary treatment.

Objective: To determine the pattern of dermatoses during pregnancy.

Materials and Methods: One hundred sixteen pregnant women of different trimester were selected out of 1674 according to the exclusion and inclusion criteria for this study. Detailed history, clinical examination and relevant investigations were done in all patients.

Results: This clinical study shows about 6.9% pregnant women had specific dermatoses. Maximum 44(37.9%) women were in between the age of 25 to 29 years. According to trimester 69(59.48%) patients were in third trimester. In case of gravid maximum 68(58.62%) patients were primigravida. In this study pruritic urticarial papules and plaques of pregnancy (PUPPP) was the most common dermatoses during pregnancy.

Conclusion: A pregnant woman with a pruritic skin eruption requires immediate evaluation and diagnosis because delayed diagnosis or misdiagnosis may pose significant risk to the fetus and the mother. It is necessary to know how to diagnosis and treat this condition to establish a better outcome for the mother and the fetus.

Introduction

Skin changes during pregnancy may be physiological. However, some dermatoses are specific to pregnancy, while others are altered by pregnancy. These changes occur as a result of an interaction of multiple factors in the body during pregnancy¹. The dermatoses which are specific to pregnancy include: Prurigo gravidarum (PG), Pruritic folliculitis of

pregnancy (PFP), Gestational pemphigoid (also known as pemphigoid gestationis), Pruritic urticarial papules and plaques of pregnancy (PUPPP, also known as pruritic eruption of pregnancy and toxemic rash of pregnancy), Prurigo of pregnancy (Besiner), Papular dermatitis of pregnancy (PD), Intrahepatic cholestasis of pregnancy, Impetigo herpetiformis, Atopic eruption of pregnancy.²

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Rationale of the Research

Like anywhere in the world, in Bangladesh, pregnancy related dermatoses are commonly encountered clinical problem among the pregnant women. There is hardly any local data available to assess the pattern of dermatoses during different trimester of pregnancy. So, to investigate the pattern of dermatoses during different trimester of pregnancy among the pregnant women such kinds of studies are necessary in our country.

Materials and Methods:

This cross-sectional study was conducted to find out the frequency and common variety of specific dermatoses in pregnancy. 116 patients were selected according to inclusion and exclusion criteria in the Department of Dermatology & Venereology, Combined Military Hospital (CMH) Chattogram from 01 May 2016 to 30 October 2017.

All pregnant women of age between 20-40 yrs having no history of hormonal therapy for conceiving were included in this study. Pregnant women having associated condition like diabetes, hypertension, hypothyroidism and hyperthyroidism were excluded from the study

Statistical analysis

Data analysis was performed by Statistical Package for Social Science (SPSS), version-12. Data was edited, coded and entered into the computer. Level of significance (p value) was set at 0.05 and confidence interval at 95%. Results were presented as text and tables.

Results

116 pregnant women out of 1674 had been suffering from pregnancy specific dermatosis. So, in this observation about 6.9% pregnant women had dermatoses which is specific to pregnancy.

Table-I

Prevalence of dermatoses in pregnancy (n-1674)

Total number of patients	Dermatoses not specific to pregnancy	Dermatoses specific to pregnancy
1674	1558(93.10%)	116(6.9%)

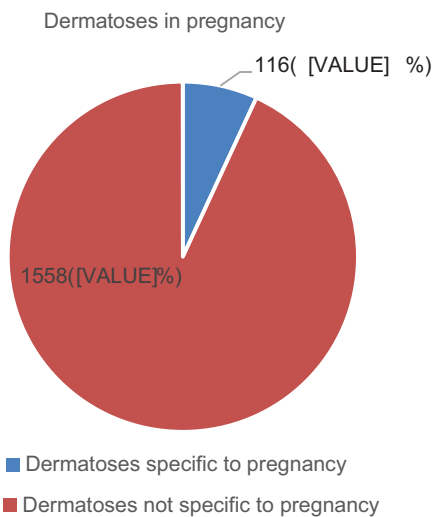


Fig.-1: Prevalence of dermatoses in pregnancy (n-1674)

Table-II: shows maximum 44(37.90%) were in between the age of 25-29 years followed by 36(31.03%) in 30-34 years. 21(18.10%) patients were in 20-24 years. 15(12.90%) were in between the age of 35-40 years

Table-II

Distribution of specific dermatoses by age

Age group	No of patients	Percentage
20-24 yrs	21	18.10%
25-29 yrs	44	37.90%
30-34 yrs	36	31.03%
35-40 yrs	15	12.90%
Total	116	

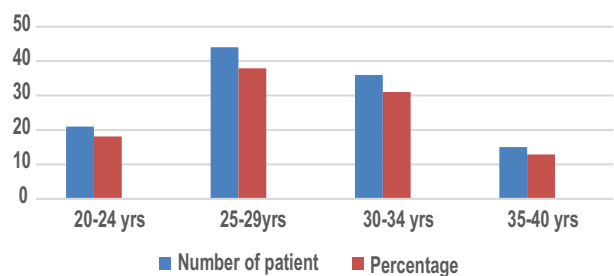
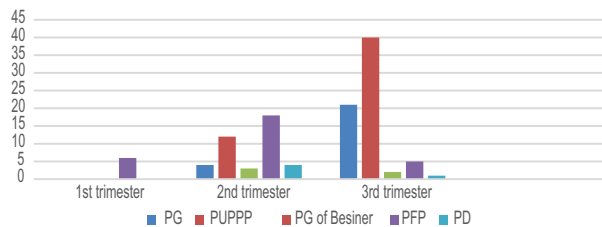
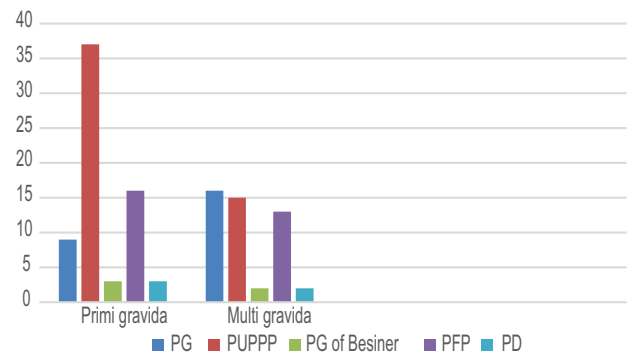


Fig.-2: Distribution of specific dermatoses by age

Table-III*Distribution of specific dermatoses by trimester (n=116)*

Trimester	PG	PUPPP	PG of Besiner	PFP	PD	All Disease
1st (0-12 wk)	00	00	00	06	00	06
	00.0%	00.0%	00.0%	20.8%	00.0%	5.1%
2nd (13-28 wk)	4	12	03	18	04	41
	16.00%	23.07%	60%	62.06%	80%	35.34%
3rd (29-40 wk)	21	40	02	05	01	69
	84.00%	76.92%	40%	17.24%	20%	59.48%
Total	25	52	05	29	05	116

Table-III: shows that according to trimester, 69(59.48%) patients were in 3rd trimester followed by 41(35.34%) patients were in 2nd trimester and 6(5.1%) patients were in 1st trimester.

**Fig.-3:** *Distribution of specific dermatoses by trimester (n=116)***Fig.-4:** *Frequency of specific dermatoses by pregnancy (n=116)***Table-IV***Distribution of specific dermatoses by Gravida (n=116)*

Gravida	PG	PUPPP	PG of Besiner	PFP	PD	All Disease
Primi gravida	09	37	03	16	4	68
	36%	71.10%	60.00%	55.17%	60.00%	58.62%
Multi gravida	16	15	02	13	02	48
	64%	28.84%	40%	44.82%	40%	41.37%
Total	25	52	05	29	05	116

Table-IV: shows that in case of gravida, maximum 68(58.62%) patients were primigravida and 48(41.31%) patients were multigravida.

Table-V*Frequency of specific dermatoses by pregnancy (n=116)*

Name of the disease	Number of patient	Percentage(%)
PUPPP (Pruritic urticarial papules and plaques of pregnancy)	52	44.82%
PFP (Pruritic folliculitis of pregnancy)	29	25%
PG (Prurigo gravidarum)	25	21.55%
PG of Besiner (Prurigo gestationis of besiner)	05	4.31%
PD (Papular dermatitis of pregnancy)	05	4.31%

Table-V: shows that pruritic urticarial papules and plaques of pregnancy (PUPPP) was the most common dermatoses in that about 52(44.82%) patients were suffering from PUPPP.

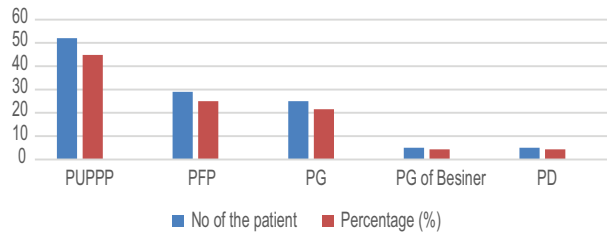


Fig.-5: Frequency of specific dermatoses by pregnancy (n=116)

Discussion

In our study, 116 patients were included according to inclusion and exclusion criteria. Among the pregnant women, 6.9% were suffering from specific dermatoses, where maximum patients were in between the age of 25-29 years. Study shows most of the specific dermatoses occurred in 3rd trimester and incidence was common in primigravida. These findings are similar of the study done by Ambros-Rudolph CM 2011³.

In this study, PUPPP was the most common (44.82%) dermatoses during pregnancy, followed by PFP (25%), PG (21.55%), Prurigo gestationis of Besiner (4.31%) and PD (4.31%). These findings are mostly similar in accordance with the observation of kroumpouzos et al⁸.

According to the age distribution in PUPPP about 27(51.92%) patients were in between the age of 25-29 years followed by 12(23.07%) in between the age of 30-34 years, 8(15.38%) patients were in between 20-24 years and 5(9.61%) patients were between the age group of 35-40 years. In case of trimester 40(76.92%) patients in 3rd trimester and 12(23.07%) in 2nd trimester. According to the gravida, maximum 37(71.10%) patients were primigravid and 15(28.84) were multigravid.

In case of pruritic folliculitis of pregnancy (PFP), 29(25%) patients were suffering from this disease. Out of this 29, 14(48.27%) patients were in between the age group of 25-29 years, 10(33.48%) patient were in 30-34 yrs and 05(17.24%) patient were in between 20-24 yrs. 18 patients(62.06%) were in 2nd trimester, 05(17.24%) were in 3rd trimester 06(20.80%) were in the 1st trimester. 16(55.17%) patients were primigravid and 13(44.82%) were mutligravid. These findings are mostly similar in accordance with the observation of Vaughan- Jones SA, Hern S, Nelson-Piercy C et al⁴.

In case of purigo gravidarum (PG) about 25(21.55%) patients were suffering from this disease. Maximum 12(48%) patients were in between the age group of 35-40 years followed by 05(20%) were in between 30-34 yrs, 05(20%) were in between 25-29 years and 03 (12%) patients were in between 20-24 years. Out of 25, 21(84%) were in 3rd trimester and 04(16%) patients were in 2nd trimester. 16(64%) patients were multigravid and 09(36%) patients were primigravid. These findings are mostly similar in accordance with the observation of Wong RC, Hrahapm, wallach RC et al⁶.

In case of prurigo of pregnancy (Besiner) 05(4.31%) patients were found in which 02(40%) were within the age group of 20-24 years, 02 (40%) were within 30-34 years and 01(20%) were within 25-29 years age group. Out of 05, 03(60%) were in 2nd trimester and 02(40%) were in 3rd trimester. 03 (60%) patients were primigravid and 02(40%) were multigravid. These findings are mostly similar in accordance with the observation of Ioannis Koutroulis, John papoutsis, George kroumpouzos⁷.

In case of papular dermatitis of pregnancy(PD), 05(4.31%) patients were found suffering from this disease in which 03(60%) were within the age group of 25-29 and 02(40%) were within 20-24 years age group. Out of 05, 04(80%) were in 2nd trimester and 01(20%) were in 3rd trimester. 03(60%) patients were found primigravid and 02(20%) were multigravid. These findings are mostly similar in accordance with the observation of Elizabeth J Horn, Christina D Chambers, Alan menter et al⁹.

In this study we did not find any case of herpes gestationis, impetigo herpiformis and intrahepatic cholestatic jaundice of pregnancy.

Conclusion

The specific dermatoses of pregnancy represent a diverse group of intensely pruritic dermatoses. The relative rarity of those conditions, the often-variable clinical appearance and the lack of definitive diagnostic test has been led to confusion regarding the appropriate diagnosis and management of the specific dermatoses of pregnancy. Obtaining a detailed medical history including personal and family history of atopy, obstetric history (primigravida, multiple gestation pregnancy, similar illness in previous pregnancies) and time of onset of the current eruption (early or

late pregnancy) is a mandatory to reach in early diagnosis and management.

Limitation of the study

The study population was selected from one selected hospital in Chattogram and sample size was small so that the results of the study may not be reflect the exact picture of the country.

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