

A Prospective Study of Dermatological Diseases During Pregnancy

Dr. Sharath Chandra Konda^{1*}, Dr.S.Bhanu Rekha²

^{1*}Associate Professor, Department of Dermatology, SVS Medical College and Hospital, Yenugonda, Mahabubnagar, Telangana.

²Professor, Department of Obstetrics and Gynecology, SVS Medical College And Hospital, Yenugonda, Mahabubnagar, Telangana.

Corresponding Author: Dr.Sharath Chandra Konda

Abstract

Introduction: Pregnancy is a period throughout which women undergo significant changes. The intense immunological, endocrinal, metabolic and vascular alterations may predispose the pregnant women to increased susceptibility to physiological and pathological skin changes. Pregnancy related skin changes can be classified as physiological changes, specific dermatoses and pregnancy related dermatoses.

Materials and Methods: Study material comprised of 200 pregnant women with skin diseases attending the skin OPD of Department of Dermatology, SVS Medical College And Hospital, Telangana. The study comprised women in all the trimesters of pregnancy who attended the skin OPD with specific skin complaints. A detailed history was elicited with reference to presenting disease and in relation to pregnancy. A detailed clinical examination was done to note all physiological and pathological skin changes. Routine investigations like blood, urine and stool were done in all cases and in sexually transmitted diseases VDRL and ELISA for HIV were done.

Results: Pruritus was present in 61.5% patients. Specific pregnancy dermatoses were seen in 33% and included prurigo gestationis, pruritic urticarial papules and plaques of pregnancy (PUPP) and pruritus gravidarum. Sexually transmitted diseases accounted for 10.5%; condyloma accuminatum was the commonest STD. Commonest dermatological disorder observed was eczema with 10.5% of cases.

Conclusion: Pregnant women are prone to suffer from a wide range of dermatological and sexually transmitted diseases. Some of these are distressing to mother, others may be associated with significant fetal risk.

Key Words: Pruritus, Pregnancy, Dermatoses, PUPP.

Date of Submission: 02-09-2020

Date of Acceptance: 17-09-2020

I. Introduction

Pregnancy is a period throughout which women undergo significant changes. The intense immunological, endocrinal, metabolic and vascular alterations may predispose the pregnant women to increased susceptibility to physiological and pathological skin changes. Pregnancy related skin changes can be classified as physiological changes, specific dermatoses and pregnancy related dermatoses.¹ Along with this the Pre-existing skin conditions may either improve or exacerbate in pregnancy, due to immunological changes in pregnancy. Decreased Cell mediated immunity during pregnancy leads to increase in severity and frequency of various skin infections.² Physiological changes in pregnancy are based on the extent of the cutaneous involvement during pregnancy and the stigma experienced by the patients.³ The fact that many of these alterations are described as physiological which does not minimize discomfort for the patients. Pigmentary changes are extremely common and affect up to 90% of pregnant women.⁴ Patients are more concerned about skin disorders ranging from cosmetic appearance to recurrence of the skin problems during pregnancy which are specific and its potential effects on fetus in terms of morbidity and mortality, the investigations and categories of skin disorders, the choice of the treatment and for prognosis of mother and fetus.⁵ Because some dermatoses of pregnancy like ICP (Intra-hepatic cholestasis of pregnancy) and Pemphigoid gestationis constitute to fetal health risks including prematurity, fetal distress or even still birth.⁶ Hence the awareness and recognition of these skin conditions and familiarity with their treatment and outcome are important. Therefore the present work was undertaken for the early diagnosis and prompt treatment which was essential for improving maternal and fetal outcome and to minimize the morbidity.⁷

II. Materials And Methods

Study duration: 04-07-2018 to 04-07-2019.

Study Site: Department of Dermatology, SVS Medical College And Hospital, Yenugonda, Mahabubnagar, Telangana. This study was done after obtaining appropriate patient consent and clearance from the ethics committee of the institution.

Study material comprised of 200 pregnant women with skin diseases attending the skin OPD of Department of Dermatology, SVS Medical College And Hospital, Telangana. The study comprised women in all the trimesters of pregnancy who attended the skin OPD with specific skin complaints. A detailed history was elicited with reference to presenting disease and in relation to pregnancy. A detailed clinical examination was done to note all physiological and pathological skin changes. Routine investigations like blood, urine and stool were done in all cases and in sexually transmitted diseases VDRL and ELISA for HIV were done.

III. Results

Pruritus was the commonest symptom accounting for 123 cases (61.5%). Majority patients belonged to the age group 20-25 years (86 patients) which accounted to 43%.

Primigravida women had higher incidence of skin complaints (103 patients), followed by second gravida (67 patients).

Third trimester attendance accounted for 93 cases (46.5%), second trimester for 75 patients (37.5%), 32 patients (16%) presented in 1st trimester.

21 patients (10.5%) suffered from sexually transmitted disease, of whom 12 had genital warts (6%), 5 patients had genital molluscum (2.5%) and 4 patients were seropositive for VDRL. Disorders specific to pregnancy accounted for 33%.

45 patients (22.5%) had prurigo of pregnancy, 15 (7.5%) patients had pruritic urticarial papules and plaques of pregnancy (PUPP), 6 patients (3%) had pruritus Gravidarum (Intra-Hepatic cholestasis of pregnancy).

Commonest dermatological disorder was eczema (10.5%), 15 other diseases accounted for less than 10% of all cases.

12 patients (6%) presented with furunculosis, 12 patients (6%) had acne vulgaris. Intertrigo (mainly of groin area) was seen in 10 patients (5%). Melasma was noted in 15 patients (7.5%)
Striae distensae was seen in 70% of patients, but was seen as incidental findings in patients who presented with other skin disorders.

Table 1: List of all Dermatoses

S.No	Manifestation	Number of patients	Percentage
1	Prurigo of Pregnancy	45	22.5
2	Pruritic Urticarial Papules & Plaques of Pregnancy(PUPP)	15	7.5
3	Pruritus Gravidarum	6	3
4	STD's 1. Genital Warts	12	6
5	2. Genital Molluscum	5	2.5
6	3. Positive VDRL	4	2
7	Eczema	21	10.5
8	Dermatophytic Infections	9	4.5
9	Furunculosis	12	6
10	Melasma	15	7.5
11	Acne	12	6
12	Scabies	10	5
13	Intertrigo	10	5
14	Plantar warts	5	2.0
15	Polymorphic light Eruptions	3	1.5
16	Varicella	4	2
17	Drug Reaction	2	1
18	Urticaria	3	1.5

19	Alopecia Areata	2	1
20	Pustular Psoriasis	2	1
21	Lichen Planus	2	1
22	Herpes Gestationis	1	0.5

Table 2: Age wise distribution

Age Wise Category	No of patients	Percentage
Less than 20 years	6	3
20-25 years	86	43
25-30 years	78	39
30-35 years	24	12
>35 years	6	3

Table 3: Trimester wise distribution

Trimister	No of patients	Percentage
First	32	16
Second	75	37.5
Third	93	46.5

Table 4: Gravida wise distribution

Gravida	No of patients	Percentage
Primi	103	51.5
Second	67	33.5
Third	14	7
Fourth	12	6
Fifth	4	2



Figure 1 (A, B): Pustular psoriasis in a primigravida 30 weeks gestational age



Figure 2 (A, B): Prurigo of pregnancy in a second gravida 26 weeks gestational age.



Figure 3 (A, B, C): PUPP in a primigravida of 35 weeks gestational age

IV. Discussion

Prurigo of Pregnancy (also called as atopic eruption of pregnancy) was the commonest specific disorder of pregnancy accounting for 22.5% cases.⁸ Most patients presented with excoriated lesions suggestive of Prurigo in the upper and lower extremities in second and third trimester.⁹ This finding is consistent with the description of Black et al who stated that the onset of these dermatoses is usually around 25 to 30 weeks of gestation.¹² According to Ram Chander et al Prurigo of Pregnancy was the second most common disorder. According to V. Shivkumar et al Prurigo of Pregnancy was the commonest specific disorder of pregnancy accounting for 9.4%.

The incidence of PUPP was 7.5%. Most of the patients were Primigravida who presented in the third trimester mostly after 28 weeks of gestation. This finding is consistent with other authors that PUPP is seen especially in Primigravidas.¹⁰ Zenon Brzoza et al found PUPP in 3rd trimester in Primigravidas and in women with multiple gestation with incidence of 2.9-16%.

Incidence of Pruritus Gravidarum (14) was 3%.¹³ According to Ram Chander et al Pruritus gravidarum was the most frequent dermatosis of pregnancy at 54.2%. Pruritus Gravidarum has been reported to have an incidence of 0.02-2.4% worldwide.¹¹

In the present study patients presented in the second and third trimester with increased levels of serum aminotransferases and bile acids, thus confirming other reports.

Incidence of sexually transmitted diseases was 10.5% in our study. Condyloma acuminatum was the commonest sexually transmitted disease, seen in 12 patients (6%), 4 patients were seropositive for VDRL without any symptomatic disease. Genital molluscum contagiosum was seen in 5 patients (2.5%).

The high incidence of sexually transmitted diseases emphasizes the need for routine serological screening of all pregnant women and their partners.

Eczema was seen in 21 patients (10.5%). 3 patients (14.2%) had previous history of eczematous disorder, 18 patients (85.7%) reported for the first time. A high prevalence of atopic eczema was first diagnosed by Vaughan-Jones et al.¹⁴ Patients presented with excoriated lesions over abdomen, upper and lower limbs. Ambros Rudolph et al showed that 80% of these patients with atopic eczema experience their first episode during pregnancy.¹⁵

Acne Vulgaris was seen in 6% and was observed mainly in last trimester when the progesterone levels are maximal and is consistent with the observation by Sujata Raj et al. Melasma was seen in 7.5% of patients. This is similar to other Indian studies where incidence of Melasma was 8-10%. This is very low in comparison to Western literature where incidence of Melasma in white skin is reported between 50 to 70%.

1 patient presented with Herpes Gestationis at 35 weeks of pregnancy. Patient presented with vesiculobullous lesions on abdomen and extremities. Skin biopsy showed basal cell necrosis and subepidermal bullae.

Twelve patients presented with Furunculosis (6%). 2 patients presented with Pustular Psoriasis at 3rd trimester. 1 patient had spontaneous preterm delivery at 32 weeks. Generalized pustular psoriasis in pregnancy can be associated with fever, tetany and hypocalcemia, tends to recur in subsequent pregnancies with early onset and increased severity.⁸

4 patients presented with Varicella at 2nd trimester. One patient with twin pregnancy had intrauterine death of one fetus and presented with leaking PV at 32 weeks of gestation. Other patients did not have any maternal and fetal complications. 2 patients had drug reaction in 1st & 2nd trimester of pregnancy.

V. Conclusion

This study highlights that pregnant women are prone to suffer from a wide range of dermatological and sexually transmitted diseases apart from the specific dermatoses of pregnancy, while some of these dermatoses are distressing only to mother, others may be associated with significant fetal risks. This study emphasizes the need for meticulous search for dermatological and sexually transmitted diseases. It's imperative that clinicians be aware of these skin changes to effectively treat and counsel patients, guide expectations and avoid unnecessary diagnostic tests.

FINANCIAL SUPPORT AND SPONSORSHIP: Nil

CONFLICT OF INTEREST: Nil

References

- [1]. Shivakumar V, Madhavamurthy P Skin in pregnancy. Indian J Dermatol. Venereol Leprol 1999; 65:23-5.
- [2]. Fitzpatrick.T.B, Eisen.A.Z, Wolff.K et al Dermatology in general medicine New York 1979 McGraw Hill Book Co-1363.
- [3]. P.Pilani Patel, 'Pregnancy and Skin', JFMPC, Oct 014: Vol:3: Issue:4: page:318-323.
- [4]. Muzaffar F, Hussain I, Haroon TS. Physiologic skin changes during pregnancy: A study of 140 cases Int J Dermatol 1998; 37:429-31.
- [5]. Ayse Neslin Akkoca1, *, Zeynep Tugba Ozdemir2, Raziye Kurt3, Bilge Bulbul Sen1, Erhan Yengil1, Celalettin Karatepe4 Oya Soylu Karapinar3, Cahit Ozer1, 'Physiological skin changes in pregnancy' Obstetrics and Gynecology Clinic, FMIMJ, -2014 Pages-33-36.
- [6]. Rita V. Vora, Rajat Gupta, Malay J. Mehta, Arvind H. Chaudhari, Abhishek P. Pilani, Nidhi Patel. Pregnancy and Skin. J Family Med Prim Care. 2014 Oct-Dec; 3(4): 318-324.
- [7]. Dr. Annapurna Kandle, M. Subramanyam Swamy, Purriuts in Pregnancy-A clinical study of pregnancy dermatoses and incidences of obstetric cholestasis, international Journal of Applied Research, 2015; 1(6):220-222
- [8]. G.W.M Millington & R.A.C Graham-Brown. Chapter 8, Skin and Skin Disease Throughout Life, Pregnancy, childbirth and the puerperium. Rook's textbook of Dermatology volume 1 8th ed., 2010. Wiley-Blackwell publication: 2010. P 8.11.
- [9]. Savitha A.S., Prabhakar M. Sangolli, et al., Skin changes in Pregnancy. Volume 2, chapter 53, 4th ed., IADVL text book of Dermatology .Bhalani Publishing House, Mumbai 2013; pg 2027.
- [10]. Silonie Sachdeva. The dermatoses of pregnancy. Ind J of Dermatol 2008; 53: 103-105.
- [11]. Ram Chander, Taru Garg, Sushil Kakkar & Arpita Jain. Specific Pregnancy Dermatoses in 1430 females from Northern India. Journal of Dermatological case reports 2011; 5(4) 69-73.
- [12]. Black MM, Stephens CJM. The specific dermatoses of Pregnancy. The British perspective. Advances in Dermatology 1991; 7:105-106.
- [13]. Zenon Brzoza, Alicja Kasperska Zajac, Pewa Oles, Barbara Rogala. Pruritic Urticarial Papules and Plaques of pregnancy. Journal of Midwifery and Women's Health 2007; 52: 44-48.
- [14]. Vaughan Jones SA, Hern S, Nelson – Pieroy C, et al. A Prospective study of 200 women with dermatoses of pregnancy correlating clinical findings with hormonal and immunopathological profile. Br J Dermatol 1999; 141: 71-81.
- [15]. Christina M Ambros-Rudolph, Jeff K Shornick. Preveiw Dermatology (3rd ed) Pregnancy dermatoses Vol.1 (27); 445-446.