Original article:

Clinical Profile of Cutaneous Manifestations in Pregnancy

Shekhar Pradhan[1], Umesh Bhoi[2], Shrutika T[3]

[1]Associate Professor, [2]Assistant Professor, [3]Junior Resident,

Department of Dermatology, Government Medical College, Miraj, Maharashtra, India.

Corresponding Author: Dr. Umesh Bhoi, Flat no. 403, Khadilkar Sankul, Khadilkar Galli, Gaonbhag, Sangli, Maharashtra, India. E-mail: drumeshbhoi@gmail.com

Date of submission: 12 June 2014, Date of acceptance: 27 Aug 2014

Abstract

Background: Pregnancy is characterized by altered endocrine, metabolic, and immunologic milieus. These dramatic alterations result in multiple cutaneous changes, both physiologic and pathologic. Changes in melanocytic nevi were historically deemed "normal" during pregnancy. Many of the consequent cutaneous changes should be considered normal, although not every woman is happy to accept them in this light.

Aims: The present study was conducted to study the various coetaneous manifestations of pregnancy attending or admitted in the tertiary hospital and to correlate the various parameters.

Materials and Methods: A total number of 110 pregnant women were included in the present study which were attending the dermatology OPD or admitted in ANC wards in a tertiary care institute.

Results: Among the total 110 patients 67 (60%) were above the age of 20 years. While 40% (n = 44) were primigravida and rest were multi gravida patients. Considering the time of presentation pertaining to the gestational age 36% (n=40) presented in second trimester while 57% (n=63) presented in third trimester of their pregnancy.

Pruritus was the common complaint seen in 36% (n=40) of the females. The cause of the underlying pruritus was urticarial lesions, scabies, eczemas. Pigmentary changes were the commonest presentation seen in our study. Linea Nigra was observed in 87% of the cases, melasma in 17% of the cases. Among the specific dermatosis of pregnancy pruritic urticarial papules and plaques of pregnancy was seen in 11 cases.

Key words: Pregnancy, Melasma, Linea Nigra, Striae, Skin Tags, Urticaria.

Introduction:

Cutaneous changes result from the altered endocrine, metabolic, and immunologic milieus that characterize pregnancy. These dramatic alterations result in multiple cutaneous changes, both physiologic and pathologic.[1] The physiological events of pregnancy and its resolution can also modify a number of cutaneous disorders and there are also some pathological skin conditions that are virtually pregnancy-specific.[2] Some of these changes are due to de novo production of a variety of protein and steroid hormones by the fetoplacental unit as well as the increased activity of maternal pituitary, thyroid and adrenal glands. Cutaneous changes and eruptions during pregnancy are exceedingly common and in some case a cause for substantial anxiety on the part of the prospective mother. Some of these are benign and reversible after delivery whereas others can have potential effects on the fetus in terms of morbidity and mortality.[3]

Pregnancy dermatomes were divided into three categories[4]

- Physiological skin changes.
- Specific dermatoses of pregnancy.
- Skin diseases affected by pregnancy.

Physiological Alterations within the skin and appendages is shown in Table 1.[1]

Table 1: Physiologic Skin Changes during Pregnancy.[1]

Pigmentary	Diffuse hyperpigmentation
	Selective hyperpigmentation (genitalia, axillae, recent scars)
	Secondary areolae
	Linea nigra
	Melasma (chloasma, mask of pregnancy)
	Darkening of melanocytic nevi
Hair	Hirsutism
	Thickening of scalp hair
	Postpartum telogen effluvium
	Postpartum androgenetic alopecia
Nail	Subungual hyperkeratosis
	Distal onycholysis
	Transverse grooving
	Brittleness
Glandular	Increased eccrine function (except palms) (miliaria)
	Elevated thyroid activity with resultant relative iodine deficiency
	Increased sebaceous function (Montgomery's tubercles)
Structural Changes	Striae distensae (striae gravidarum)
	Molluscum fibrosum gravidarum (acrochordons)
Vascular	Spider angiomas (spider nevi)
	Palmar erythema
	Nonpitting edema (hands, ankles, feet, face)
	Varicosities
	Cutis marmorata

Most women notice a generalized increase in skin pigmentation during pregnancy and the change is more marked in dark-haired than in fair-haired women. Many women also notices an increase in the size, activity and number of melanocytic naevi.[5] The extent to which human pigmentary changes are brought about by oestrogen and progesterone, or by melanocyte-stimulating hormones derived from pro-opiomelanocortin and other factors is uncertain.[6]In approximately 70% of women, especially those of

www.ijbamr.com P ISSN: 2250-284X , E ISSN : 2250-2858

darkcomplexion, chloasmal pigmentation also develops during the second half of pregnancy.

Specific Dermatoses of Pregnancy: Includes Pruritic urticarial papules and plaques of pregnancy (PUPPP), pruritus gravidarum, pemphigoid gestationis, pruritic folliculitis.[7]

AIMS

The present study was conducted to study the various cutaneous manifestations of pregnancy either it may be pertaining to physiological changes or specific dermatoses of pregnancy and to correlate the various parameters.

MATERIALS AND METHODS

Total of 110 pregnant females were examined attending the outpatient Department of Dermatology, indoor patients of Antenatal Care wards of a tertiary teaching institute were randomly selected. Detailed history and clinical findings were noted and recorded in the standard proforma. Whenever it was necessary biopsy of the skin lesions was done for confirmation. Culture, KOH mounts, Gram stain, Tzanck smear was performed wherever required. Screening for VDRL and HIV was also done.

RESULTS

Among the total 110 patients 67 (60%) were above the age of 20 years. While 40% (n = 44) were primigravida and rest were multi gravida patients. Considering the time of presentation in the pertaining to the gestational age 36% (n=40) presented in second trimester while 57% (n=63) presented in third trimester of their pregnancy.

Pruritus was the common complaint 36% (n=40) by the females. The cause of the underlying pruritus was urticarial lesions, scabies, and eczemas.

Physiological changes were encountered in some extent in almost all cases. Pigmentary changes were the commonest presentation seen in our study. Linea Nigra was observed in 87% of the cases, melasma in 17% of the cases, secondary areola in 63%. Darkening of nevi was reported by 42% of cases. Pigmentation of their old caesarian section scar was noticed in 5 cases.

Another most common structural change observed was presence of striae distensae in almost 80% of cases. Acrochordons was seen in 18% of cases.

Vaginal discharge was complained in 21% (n=24) of cases. Among these the candidial vulvovaginitis was seen in 16 cases.

Pertaining to hair changes hair fall was one of the common complaints in 16% which most of the patient narrated. Oedema of the feet was seen in 29%, varicocities of leg veins seen in 19% cases. Miliaria was seen in 6% of cases.

Among the specific dermatosis of pregnancy pruritic urticarial papules and plaques of pregnancy was seen in 11 cases while pruritus gravidarum in 2 cases.

On serological investigations VDRL was positive in lower titer in 3 cases.

DISCUSSION

A total 110 patients were examined under this study who attended the OPD of Dermatology departments or were admitted in ANC wards. Age of the patients ranges from 18 to 35 years with 60% of patients were above 20 years. Fifty seven percentage of patients presented in third trimester while 36% in second trimester. Among these 86% females were housewives and 14% were involved in labor work.

Physiological changes of pregnancy were seen in almost all patients in one or other forms. The commonest being the pigmentary changes in 89%.

www.ijbamr.com P ISSN: 2250-284X , E ISSN : 2250-2858

Linea nigra in 87%, melasma in 17% of the cases was seen. In a similar study done by Shiva kumar V et al [8] pigmentary changes occurred in 98.82% of the patients. Melasma was observed in 7% similar to the finding of Raj et al.[9]Wong and Ellis[10] reported melasma in 50-70 % of pregnant women with an onset during the 2nd trimester.

The common presenting complaint among the pregnant females was pruritus seen in 36% (n=40).Wong et al and Roger et al reported incidence of pruritus in 20% and 18% respectively of all pregnancies.[10,11] The underlying cause of pruritus being 11 with urticaria , 4 scabies, 13 eczemas and 12 patients of fungal infections.

Among the structural change associated with pregnancy striae distensae was seen in 80% of the cases in our study which was comparatively on higher side of similar studies which showed 66.47%[8] of patients and to the observation by Raj et al (75%).[9]

Among the specific disorder of pregnancy pruritic urticarial papules and plaques of pregnancy was seen in 10% (n=11) cases usually starting in second trimester. Western reports quote an incidence of around 2%.[12]

To conclude the presentation of skin manifestations can be so varied and common that adequate knowledge would lead to correct diagnosis and minimize the investigative load.

REFERENCES

1. Julie K. Karen & Miriam Keltz Pomeranz, Skin Changes and Diseases in Pregnancy, Fitzpatrick's Dermatology in General Medicine Eighth Edition,2012,108: 1204-1212.

2. G.W.M. Millington1 & R.A.C. Graham-Brown2, Skin and Skin Disease Throughout Life, Rook's Textbook of Dermatology, Eighth Edition 2010, 8.1-8.29.

3. Kroumpouzos G, Cohen LM. Dermatoses of pregnancy. J Am Acad Dermatol 2001;45:1-19.

4. Kumari R, Jaisankar T J et al. A clinical study of skin changes in pregnancy. Indian J Dermatol Venereol Leprol 2007;73:141.

5. Nussbaum R, Benedetto AV. Cosmetic aspects of pregnancy. Clin Dermatol2006; 24: 133–41.

6. Millington GWM. Pro-opiomelanocortin (POMC): the cutaneous roles of its melanocortin products and receptors. Clin Exp Dermatol 2006; 31: 407–12.

7. Shornick JK. Herpes gestationis. J Am AcadDermatol1987; **17**: 539–56.

8. Shivakumar V, Madhavamurthy P. Skin in pregnancy. Indian J Dermatol Venereol Leprol 1999;65:23-5.

9. Raj S, Khopkar V, Kapasi A, et al. Skin in pregnancy. Indian J Dermatol Venereol Leprol 1992; 58:84-88.

10. Wong RC, Ellis CN. Physiologic skin changes in pregnancy. J Am AcadDermatol 1984;10:929-940.

11. Roger D, Vaillant L, Fognon A, et al. Specific pruritic diseases of pregnancy. Arch Dermatol 1994;130:734-739.

12. Winton GB, Lewis CW. Dermatoses of pregnancy. J Am Acad Dermatol 1982;6:977-998.