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Original Research Paper | Obstetrics & Gynecology

SKIN DISORDERS DURING PREGNANCY

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ABSTRACT

Background: Pregnancy is related with various infective pathology and physiological adaptations that are pregnancy related, metabolic, endocrine and vascular changes which make the pregnant women susceptible to change of skin and appendage to study various cutaneous changes in pregnancy. **Methods:** This study was an observational cross sectional study conducted in obstetrics and gynaecology department in government medical college Nagpur after informed consent and ethical committee clearance in duration of 1 year from February 2020 to December 2020. Detailed medical and obstetric history of patients were obtained, physical and dermatological examination were performed. **Results:** Most of patients show cutaneous, among them physiological changes were most common followed by infective causes. **Conclusions:** this study brings focus on pregnancy specific and nonspecific dermatoses Pregnant women are prone to various cutaneous manifestation during pregnancy. Detailed history and clinical presentation is helpful for confirmation of diagnosis and most appropriate laboratory evaluation is helpful to diminish the maternal and fetal morbidity

KEYWORDS : Pregnancy nonspecific dermatoses , pregnancy specific dermatoses

INTRODUCTION

Pregnancy may result in number of changes, ranging from physiological alterations in pigmentation to serious dermatologic diseases.

Pregnancy is characterised by many physiological skin changes as Striae gravidarum, Melasma.

Accompanied by hair, nail, vascular changes which are due to hormonal effects.

Along with this, the pre-existing skin conditions may either improve or exacerbate in pregnancy.

Due to immunological changes in pregnancy. As cell mediated immunity is depressed during normal pregnancy, it leads to increased severity and Frequency of skin infections as candidiasis. Though most of dermatoses resolve after pregnancy.

The risk factors, exogenous or endogenous which are able to stimulate, emergence, relapse or worsening of these problems are: hormone (progesterone, oestrogen), genetic predisposition, sun exposure , autoimmunity , age , liver disease , anaemia , infections, psych effective status of pregnant women .

AIMS OBJECTIVE

1. To study the common skin disorders in pregnancy
2. Effect of pregnancy on immune system
3. Study of skin disorders that flare in pregnancy
4. Effect of treatment on skin disorders in pregnancy

MATERIALS AND METHODOLOGY

For study 100 cases selected for tertiary care centre, examined by dermatologist.

Brief questionnaires were performed.

Inclusion criteria

1. 20 to 40 years of aged pregnant patients were included
2. Patient willing to participate in study and able to give consent
3. Patient able to comply with treatment
4. Booked case and Unbooked cases
5. Patients from urban and rural area

Exclusion criteria

1. Patient not willing for examination
2. Patient unable to comply with treatment

METHODOLOGY – We performed study on cases from tertiary care centre with 3 phases

1. Visual and clinical examination of skin lesion
2. Total skin examination by dermatologist
3. Correlation with histological findings from skin scrapings, skin biopsy and classifications

All willing ANC patients were included in study

RESULT

A total of 180 patients of age group 18-36 years were analysed in this study. Out of which 150 were primi gravida. 30 were multigravida. Predominantly they presented in third trimester of pregnancy.(103 cases , 57%) followed by second trimester (44 cases , 24%) and third trimester (33 cases , 18%).

The most common presenting complaint was itching over groin area followed by skin lesions over face and trunk. Other presenting symptoms were hair fall, vaginal discharge, hypersensitivity to sunlight.

The most common physiological change was hyperpigmentation which was seen in 54 cases (45%). Linea nigra was most common pattern of hyperpigmentation, seen in cases followed by pigmentation of neck, Melasma, varicosities and diabetic ulcer.

Vascular changes seen in cases and glandular changes seen in cases

Physiological changes seen in pregnancy:

Pigmentation	44
Linea nigra	38
Pigmentation of neck	16
Glandular changes	6
Vascular changes	8
Varicosities	6
Palmar erythema	12
Acne vulgaris	14

Distribution in Infectious dermatological disorders in pregnancy:

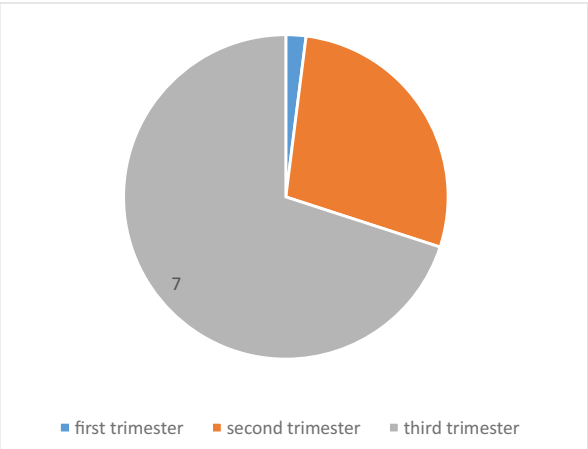
Chicken pox	12
Molluscum contagiousum	6
Pemphigoid gestationis	3
Folliculitis	4
Vulvovaginitis	3

Psoriasis	6
Herpes zoster	6
Contact dermatitis	4
Tinea cruris	32
Scabies	4
Tinea versicolor	2
HPV	4

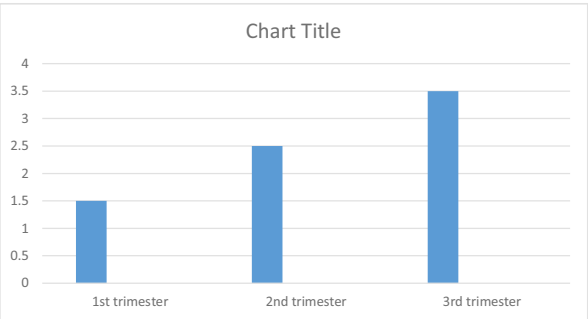
Pregnancy specific dermatoses

Intrahepatic cholestasis of pregnancy	12
Polymorphic eruption	2
Eczema	4
Seborrheic dermatitis	4
Atopic dermatitis	2

Distribution of parity among cases: most of the cases are seen in third trimester



Analysis of patients with infectious disorders according to trimester



Tinea cruris was noted in 32 (16%) cases while tinea versicolor in 2 (1%) cases. In 4 cases contact dermatitis noted. Most of the cases with tinea cruris and pigmentation were related with other dermatoses, acne vulgaris in 12 (6%) cases.

Psoriasis noted in 6 cases, aggravated in pregnancy.

Chicken pox associated with fever, myalgia noted in 12 cases. Molluscum contagiousum noted in 6 cases.

Specific dermatoses noted in 24 cases. Mean age of patients with pregnancy dermatoses was 26.6. Maximum number of cases was observed below 30 years. There was significant higher incidence of pregnancy in third trimester.

Correlation with other studies

	Puri and puri	Raj et al	Kumar et al	Kumar s
Linea nigra	-	-	91.4%	57%
Melasma	14%	8.8%	2.5%	81%
Tinea versicolor + tinea cruris	16%	2.9%	2.6%	-
Herpes genitalis	-	-	0.32%	1.17%
Palmar erythema	-	33.3%		-
Glandular changes	-	-	37.8%	-
Intrahepatic cholestasis in pregnancy	1%	2.4%	22.7%	3.52%
Eczema	-	0.9%	1.1%	-
Varicosities	-	3%	0.33%	-
Scabies	-	4.2%		17%
Polymorphic eruption	22%	1.2%	63.6%	2.35%
Psoriasis	-	-	0.16%	-
Folicullitis	2%	-	4.5%	-

DISCUSSION

Common skin conditions during pregnancy generally can be separated into three categories:

1. (1) Physiological hormone related (2) pre-existing (3) pregnancy specific dermatological disorders. In this literature, we found various dermatological specific and nonspecific disorders associated with pregnancy. We enrolled 180 ANC patients with dermatological disorders for study irrespective of duration of pregnancy and gravidity.

2. In pregnancy specific dermatoses most common was intrahepatic cholestasis was common (12 cases, 6%), followed by eczema (4 cases, 2%) and seborrheic dermatitis (4 cases, 2%). Pregnancy specific disorders were presented in Raj et al. Study 17 cases (14%), Shivkumar and Madhavamurthy study 26 cases(9.41%), Kumari et al study 22 cases (14%) while in our study cases 28 cases (15.5%)

3. In shivkumar and Madhavmurthy study patients were presented mostly in 3rd trimester 105 patients (61.76%), kumara et al aldo found most common presentation of patients during 3rd trimester 444 cases (73%) and our study we found similar results 103 cases (57%)

4. Total 8 patients were diagnosed as having HIV infection. Out of them 2 (1%) patients were presented with herpes genitalis , 3 (1.6%)patients with HPV , 1(0.5%) case with trichomonas vaginitis , 2(1%)cases with tinea criuris.

Physiologic cutaneous changes in pregnancy

PIGMENTARY CHANGES

Hyperpigmentation occurs in at least 90 % of pregnant women, observe a mild generalized hyperpigmentation of nipples, areola and vulva due to increase in melanocyte stimulating hormone, oestrogen and progesterone.

1. Linea nigra

A hyper pigmented line extending from xiphoid to pubic region

2. Melasma

K/a mask of pregnancy or chloasma develops in 50-70 % of pregnant women during second trimester. Macular patterns appears on forehead, temples, cheeks, lips.

Similar changes seen in 20 % of women raking oral contraceptive pills. Treatment involves use of bleaching agents such as hydroxyquinone 4% cream with tretinoin

VASCULAR CHANGES

Influenced by changes in maternal hormones such as HCG, ACTH like substances, TRH, oestrogen.

These hormones may triggers increase in cardiac output, vascular proliferation, congestion.

1. Varicosities

Increased distension in superficial venous vasculature of legs, vagina, vestibule (jacquemier – Chadwick sign) and rectum

(haemorrhoids) hormonal factors and increased intra-abdominal pressure. Elevation of legs and lying in as in Trendelenburg position helps to decrease varicosities.

2. Haemangioma

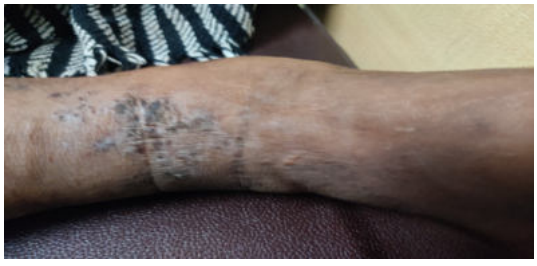
Occurs spontaneously in 5 % of pregnancies during second and third trimester

3. palmar erythema

Mostly occurs on thenar and hypothenar eminence with sparing of digits seen in two thirds of pregnant women during first trimester and resolves in postpartum period.

ATOPIC DERMATITIS

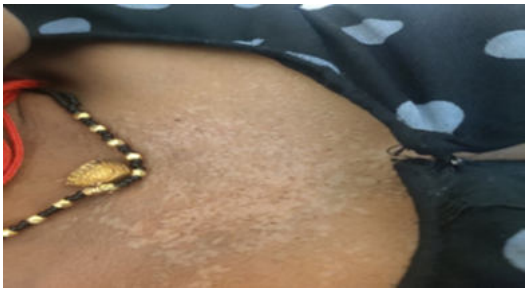
Atopic eczema is chronic inflammatory skin condition with itching. There is erythema, itching, scaling, lichenification sometimes papules. With excoriation, there can be oozing, weeping and secondary bacterial infections. It may be associated with hay fever / asthma. Atopic dermatitis may improve during pregnancy. Treatment involves use of topical steroid.



PITYRIASIS VERSICOLOR

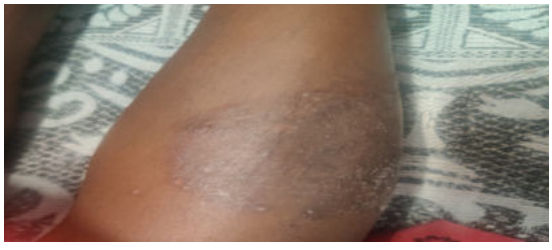
Multiple ill-defined hypo pigmented macules patches appears on anterior and posterior aspect of trunk.

Scratch test is positive treatment involves topical steroids.



PSORIASIS

This is chronic inflammatory and proliferating skin condition that presents as sharp demarcated erythematous plaques with silvery scale. Treatment options include topical; corticosteroids, calcipotriol and tar.

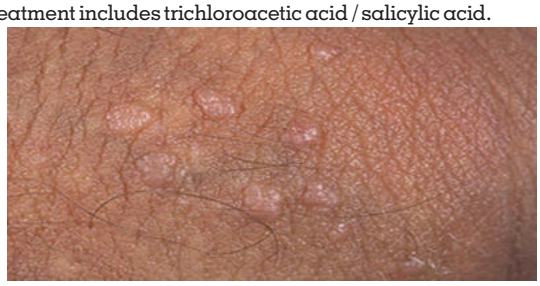


HUMAN PAPILLOMA VIRUS INFECTIONS

Warts referred as verrucae vulgaris. In ano genital area, these are commonly called as condyloma acuminatum present as flesh coloured, exophytic, and cauliflower like masses.

It is harmful to baby as it causes juvenile respiratory papillomatosis.

Treatment includes trichloroacetic acid / salicylic acid.



CHICKEN POX VIRUS INFECTIONS

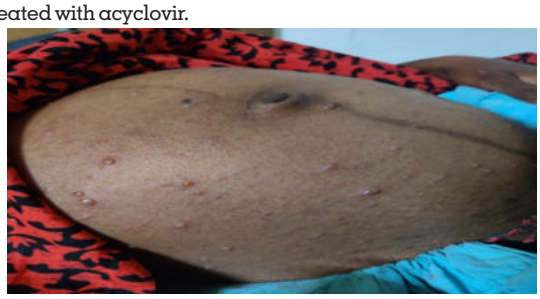
A highly contagious viral infections which causes itchy, blister like rash on skin.

It is highly contagious to those who haven't had the disease. It spreads by airborne droplets, saliva, skin to skin contact, touching, by mother to baby by pregnancy, labour, nursing.

Typical vesicular rash – 200 to 500 lesions start on head and trunk, progress to peripheries. Appear as crops of papules, vesicle with surrounding erythema.

Complicated by bacterial superinfections by staphylococcal, streptococcal infections.

Treated with acyclovir.



HERPES SIMPLEX VIRUS

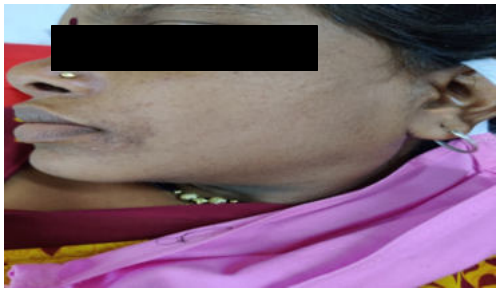
HSV is common cause of viral infections worldwide. HSV1 AND HSV2 cause both primary and recurrent infections. Primary infections are more severe. Clinically presents as grouped vesicles on erythematous base that may erode and form ulcerations.

Lesions frequently occur around the mouth referred as cold sores, blisters, fever.

Genital herpes infections at time of delivery associated with high risk of neonatal infections .Patient considered at high risk for herpes should be tested weekly with viral culture and if there is active infections or viral shedding caesarean delivery should be performed.

Acyclovir is pregnancy category C antiviral agent used for primary and symptomatic infections.

Valacyclovir is pregnancy category B also used in pregnancy



CONCLUSION

During past few decades, a significant amount of new data

has provided new insights into the classification, pathogenesis, treatment, prognosis and foetal risks that are associated with specific dermatoses of pregnancy. This study brings into focus various specific and nonspecific skin disorders during pregnancy.

The study was conducted on 180 patients Between February 2020 to December 2020. Most common age group was 18-36 years. Most common physiological skin changes is hyperpigmentation. Most common specific dermatoses in pregnancy was cholestasis of pregnancy (12,6%). Tinea cruris is in increasing trend in pregnant women requires personal care.

Pruritus and skin changes are common during pregnancy and are usually benign and self-limiting. In some cases however they are symptoms of pregnancy specific dermatoses. These constitute a rare group of inflammatory dermatoses specifically related to pregnancy. Skin changes are vary in morphology, location, time of onset, symptoms.

In HIV positive patients, HPV was most common followed by herpes and tinea cruris.

It is important to combine medical history, morphologic criteria and histopathology of lesions.

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