ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 3.4
IJAR 2015; 1(6): 220-222
www.allresearchjournal.com
Received: 12-03-2015
Accepted: 15-04-2015

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Pruritus in Pregnancy – A clinical study of pregnancy dermatoses and incidence of Obstetric cholestasis

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Abstract
The main objective of this study was to determine the various causes for pruritus in pregnancy and to evaluate the incidence of intra hepatic cholestasis of pregnancy in the women attending obstetric OPD and dermatology OPD of Govt General Hospital attached to Kurnool Medical College, Kurnool during one year period. Certain dermatoses are specifically seen in pregnancy, they may be associated with pruritus and with or without cutaneous lesions. Among the dermatoses of pregnancy, Obstetric cholestasis has adverse maternal and foetal outcome. Hence this study focused to identify the incidence of Obstetric cholestasis in the Antenatal women presented with pruritus without rash. Liver function tests, Ultrasound evaluation of maternal liver pathology and foetal evaluation were carried out and treated accordingly. It is therefore important for clinicians to recognise and treat these cutaneous disorders to minimize maternal and foetal morbidity.

Keywords: pruritus, pregnancy, pregnancy dermatoses

1. Introduction
During pregnancy alterations in the appearance of the skin are not uncommon, also many metabolic and endocrine changes though physiological in nature, produce various pathological alterations, ranging from trivial cutaneous changes to changes that are pathological, reccurent and specific to pregnancy. Pruritus is an accompanying symptom of most of the dermatoses suffered by Gravid women. It is believed to be very common symptom found in 3% - 14% of pregnant women [1, 2]. In INDIA it is found to be 1.8%. Pruritus has many causes and may occur wih various dermatalogical disorders such as scabies, Urticaria, Drug eruptions, Pediculosis, Atopic dermatitis and neuro dermatitis. Specific dermatoses of pregnancy are Herpes gestationis, Pruritic urticarial papules and plaques of pregnancy (PUPPP), Papular dermatitis of pregnancy, Prurigo gestationis and Impetigo herpitiformis. Pruritus Gravidarum (Obstetric cholestasis) is a condition resulting from temporary cholestasic state. This is defined as pruritus in the absence of rash with abnormal liver function inthe absence of other liver pathology, and which resolves following delivery. As OC is associated with adverse maternal and foetal outcomes including intra uterine death, premature labour, Meconium stained liquor and postpartum harmorrhage, many women with pruritus in pregnancy are investigated [3, 4]. A more precise understanding of the clinical nature and presentation of Pruritus and OC in the antenatal woman could reduce the number of unnecessary investigations in women with benign pruritus.

2. Materials and methods
This study was conducted in the department of OBG in association with department of Dermatology of Govt General Hospital attached to Kurnool Medical College, Kurnool, A.P., India over a period of one year from FEB 2013 to JAN 2014. Among 23,400 antenatal women attending OPD and referral cases to the Dermatology OPD from various districts, 468 women with symptoms of pruritus and various cutaneous lesions were taken in to study. Detailed history including demographic data chief complaints related to the skin, presence of itching, skin lesions, onset in relation to duration of pregnancy, jaundice, vaginal discharge, past or family history of similar lesions, exacerbating factors, associated medical or skin

disorders was elicited and recorded. Complete cutaneous examination was done in all cases to study all the physiological changes of skin and its appendages. If Specific dermatoses was present, the morphology of skin lesions, distribution and the sites involved were studied. Appropriate investigations were done, screening with VDRL and ELISA for HIV was done in all the cases. Women with pruritus without any rash but presence of excoriations were investigated apart from above investigations, liver function tests, thyroid function tests, ultrasound examination for evidence of cholestasis and foetal condition was evaluated.

3. Results were tabulated and analysed

Table 1: Specific Dermatoses of Pregnancy

Sr. No	Specific pregnancy dermatoses	No. Of cases	Percentage %
1	Polymorphic eruption of pregnancy(PUPPP)	21	3.7
2	Herpes Gestationis	1	0.17
3	Prurigo of pregnancy	1	0.17
4	Pruritic folliculitis of pregnancy	NIL	

Table 2:

1	Intra Hepatic Cholestasis of pregnancy (Obestetric Cholestasis)	12case	2%

Table 3: Coincidental Dermatological Disorders

Sr. No	Dermatological Disorders	No. of cases	%	Sr. No	Dermatological Disorders	No. of cases	%
1	Furuncles	6	1	19	Primary irritant Dermatitis	15	2.5
2	Folliculities	12	2	20	Nipple Eczema	9	1.5
3	Hansens	3	0.5	21	Pompholyx	6	1
4	Herpes simplex labialis	12	2	22	Vitiligo	6	1
5	H. Simplex progenitalis	3	0.5	23	EMF	6	1
6	Molluscum contagiosum	9	1.5	24	Drug Rash	6	1
7	Genital Warts	9	1.5	25	Aphthous Ulcers	30	5
8	Veruca Vulgaris	9	1.5	26	Angular Stomatitis & Glossitis	30	5
9	Herpes Zoster	3	0.5	27	Acne Vulgaris	30	5
10	Chiken pox	6	1	28	Papular Urticaria	30	5
11	Ptyriasis Rubra	6	1	29	Hyper Hydrosis	6	1
12	Scabies	30	5	30	Ac.Urticaria	30	5
13	Dermatophytes.Cruris	24	4	31	Keratosis Pilaris	6	1
14	T.Corporis	30	5	32	Keloids	3	0.5
15	T.Versicolor	30	5	33	Phrynoderma	30	5
16	Polymorphic Light eruption	30	5	34	Psoriasis	3	0.5
17	Seborrhoeic Dermatitis	9	1.5	35	Miliaria Rubra	2	0.3
18	Allergic contact dermatitis	15	2.5		TOTAL:-	494	

4. Discussion

Out of 600 women, 23 were found to be specific pregnancy dermatoses (3.8%). Commonest dermatoses is pruritic urticarial papules and plauues of pregnancy(PUPPP), 21 cases 3.7%, Prurigo Gestationis 1 case 0.17%, one case of Herpes Gestationis 0.17%, cases of pruritic folliculiti of pregnancy are Nil 0%

83 women presented with pruritis without skin lesions. On investigation 12 cases (2%) are Obstetric Cholestasis (Intra hepatic cholestasis of pregnancy) among which 5 cases had jaundice. These woman presented with intense pruritus over abdomen in 80%, palms and soles 5%, and remaining 5% on other areas. All these women are carefully monitored, foetal wellbeing was assesed. Symptomatic treatment with antihistemines, and mild steroids releived them of itching, mild sadative effect of antehistemines releived restlessness. Good maternal and foetal outcome achieved in these cases. In the remaining 71 cases, cause of pruritus was Hypothyroidism in 6 cases (1%), Iron deficiency Anaemia in 35 cases (5.8%), intestinal worm infestation 20 cases (3.3%), Food allergy in 5 cases (0.8%), and HIV in 5 cases (0.8%).

The commonest associated dermatological disorders in pregnancy are scabies, tenia corporis, t.versicolor, polymorphic light eruption,aphthous ulcers, angular stomatitis, acne vulgaris, papular urticaria, Acute Urticaria, phrynoderma, each 30 cases (5%). Other disorders are Furuncles 6 cases (1%), Folliculitis 12 cases (2%), Hansens 3 cases (0.5%).Herpes simplex labialis 12 cases (2%), Herpes simples progenitalis 3 cases (5%), Molluscum Contagiosum 9 cases (1.5%), Genital Warts 9 cases (1.5%), Verruca Vulgaris 9 cases (1.5%), Herpes Zoster 3 cases (0.5%), Chicken Pox and pyteriosis rubra 6 cases of each (1%). Dermatophtes T. Cruris 24 cases (4%), Seborrhoeic dermatitis and Nipple Eczema each 9 cases (1.5%) Allergic Contact Dermatitis and Primary irritant dermatitis each of 15 cases (2.5%). Pompholyx, Vitiligo, EMF, Drug rash, Keratosis Pilaris each 6 cases (1%). Milaria cases are 2 (0.3%).

Many of the symptoms and signs are so common that they are not usually considered as being abnormal, but regarded as physiological and can sometimes provide contributory evidence of pregnancy 6neer. In addition, pregnancy can modify a number of concomitant dermatoses and there are some pathological skin conditions that are virtually pregnancy specific.

4.1 Pruritic urticarial papules and plaques of pregnancy (PUPPP) is the most common dermatoses of pregnancy, occur in 1 in 160 to 240 pregnancies [5]. Classically, this disease occurs in primigravida during the third trimester, and the incidence is higher in multiple gestations (i.e., 0.5% of single births, 2.9% of twin gestation, and 14% of triplets [6]. Pruritic urticarial papules and plaques most commonly present as intensely pruritic papules within striae distensae. Over the next several days, erythematous, urticarial papules plaques spread to involve the trunk and extremities [7, 8]. The periumbilical region, face, palms, and soles are usually spared. A relationship to skin distension has been proposed due to the higher prevalence of PUPPP in multiple gestations and in women with increased weight gain during pregnancy,

or the condition may represent a cutaneous response to the presence of circulating fetal cells that have invaded maternal skin [9, 10].

4.2 Intrahepatic cholestasis of pregnancy or Obstetric Cholestasis is caused by maternal intrahepatic bile secretory dysfunction. A genetic predisposition for this disorder has been described. This disease is characterised by intense generalised pruritus that usually begins in the third trimester. Although constant, the pruritus is classically much worse at night. It may be most severe on the palms and soles. The important feature of intrahepatic cholestasis is the absence of primary lesions, such that excoriations are the only cutaneous finding [11]. Jaundice is present in a minority of patients. Symptoms tend to dissipate within days of delivery, but there is a tendency toward later development of gallbladder disease in these women. There is a potential for recurrence in subsequent pregnancies or with OC pill use. Fetal risk is also a matter of concern.

4.3 Prurigo of pregnancy (PP) is the most poorly characterized gestational dermatoses. It is a diagnosis of exclusion, and a large number of pruritic entities unrelated to pregnancy must be considered. It classically affects second half of pregnancy, affecting 1 in 300 pregnant women [12]. Presents clinically as discrete, bite-like papules on the extremities that resemble scabies or other arthropod bites. It is often seen in women with atopic background, and is associated with increased serum levels of immuno globulin E (IGE)- supporting the notion that PP may represent a gestational variant of atopic dermatitis occurring as a result of common pruritus gravidarum [13]. Liver function studies, including serum bile acids, should be performed to rule out cholestasis or hepatitis. Treatment is symptomatic, including topical emolients, topical midpotency corticosteroids, and systemic antihistamines. There is no associated maternal or fetal risk. The eruption typically resolves soon after delivery.

4.4 Conclusion

Pregnant women are prone to suffer from a wide range of dermatological problems and sexually transmitted diseases, apart from the specific dermatoses of pregnancy. This study emphasises the need for scupulous and meticulous search for dermatological and sexually transmitted diseases and women who presents with only pruritis without skin lesions are particularly subjected to investigations where intrahepatic cholestasis of pregnancy to be diagnosed to avoid maternal and foetal morbidity instead of a casual cursory examination and dismissing the patients with symptoms attributing them to the normal course of pregnancy. These pruritic dermatoses are unique to the gravid state. A detailed history and awareness of clinical presentation facilitate confirmation of the diagnosis, and will direct the most appropriate laboratory evaluation in an effort to minimize maternal fetal morbidity. In addition, monitoring of liver function and thyroid function deserves special consideration.

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