

Dermatoses of pregnancy. A prospective study from Benghazi, Libya

Abstract

Introduction: Cutaneous findings in pregnancy can be physiologic, coincidental, alterations in pre-existing skin diseases or pregnancy specific. The Pregnancy dermatoses can impact the health of the pregnant woman and the fetus

Objectives: Our objective was to determine the spectrum of skin disease associated with pregnancy and to identify the various types of pregnancy specific dermatoses and their fetal risk.

Materials & methods: A prospective study was performed at dermatology out-patient department of Jumhoria hospital and Ibn Sina polyclinic, Benghazi-Libya over a period of 2 years. A total of 200 pregnant women presented with dermatological complaint were included. History, skin examination, and relevant investigations were performed. The patients with pregnancy specific dermatoses were followed up till delivery and the pregnancy outcome was recorded. The results were analyzed using SPSS. Results: Mean age was 32 years, 62% was multigravidae and 54% of pregnancy dermatoses occurred during third trimester. The highest number of cases presented with coincidental or preexisting diseases (71%); infections (34%), pre-existing skin diseases included eczema (13%), acne vulgaris (4%) and psoriasis (3%) Hyperpigmentation and striae gravidarum represented the main physiological changes (17%). Specific pregnancy dermatoses were present in 12%, these were intrahepatic cholestasis of pregnancy (4%), atopic eruption of pregnancy (3%), pemphigoid gestationis (3%) and polymorphic eruption of pregnancy (2%). Fetal complications including fetal mortality were reported with pemphigoid gestationis (30%) and intrahepatic cholestasis of pregnancy (25%).

Conclusions: This study provides important data on the spectrum of pregnancy dermatoses in Libyan patients. Most of the reported pregnancy dermatoses were benign with no adverse effect on the fetus. Pemphigoid gestationis and intrahepatic cholestasis of pregnancy can be a source of significant fetal risk. To the best of our knowledge this is the first study carried out on pregnancy dermatoses in Benghazi, Libya.

Keywords: dermatoses, pregnancy, pemphigoid gestationis, intrahepatic cholestasis

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Abbreviations: AEP, atopic eruption of pregnancy, PEP polymorphic eruption of pregnancy; PG, pemphigoid gestationis; ICP, intrahepatic cholestasis of pregnancy

Introduction

Many skin changes occur during pregnancy as a result of the altered endocrine, metabolic and immunological state. These can be grouped into physiological cutaneous changes, coincidental or preexisting diseases modified by pregnancy and specific dermatoses of pregnancy. The pregnancy specific dermatoses occur exclusively during pregnancy. They have been classified as atopic eruption of pregnancy (AEP), polymorphic eruption of pregnancy (PEP), pemphigoid gestationis (PG) and intrahepatic cholestasis of pregnancy (ICP). They can impact the health of the pregnant woman and the fetus.^{1,2}

Objectives

Our objective was to determine the spectrum of skin disease associated with pregnancy and to identify the various types of pregnancy specific dermatoses and their fetal risk.

Materials and methods

A prospective study was performed at dermatology out-patient department of Jumhoria hospital and Ibn Sina polyclinic, Benghazi-Libya over a period of 2 years. A total of 200 pregnant women presented with dermatological complaint were included. History, skin examination, and relevant investigations were performed. The Patients with pregnancy specific dermatoses were followed up till delivery and the pregnancy outcome was recorded. The results were analyzed using SPSS.

Results

Mean age was 32 years, 62% was multigravidae and 54% of pregnancy dermatoses occurred during third trimester. The highest number of cases presented with coincidental or preexisting diseases (71%); infections were the commonest (34%); vulvar candidiasis was reported in 8%, scabies (6%), viral wart (5%), Chicken pox (2%) and measles (1%). Inflammatory skin diseases included eczema (13%), acne vulgaris (4%) plaque psoriasis (3%) and pustular psoriasis (2%). Hyperpigmentation and striae gravidarum represented the main physiological changes (17%). Specific pregnancy dermatoses were present in 12%, these were ICP(4%), AEP(3%), PG(3%) and PEP

(2%). Fetal complications including fetal mortality were reported with PG (30%) and ICP (25%) (Figure 1-9).

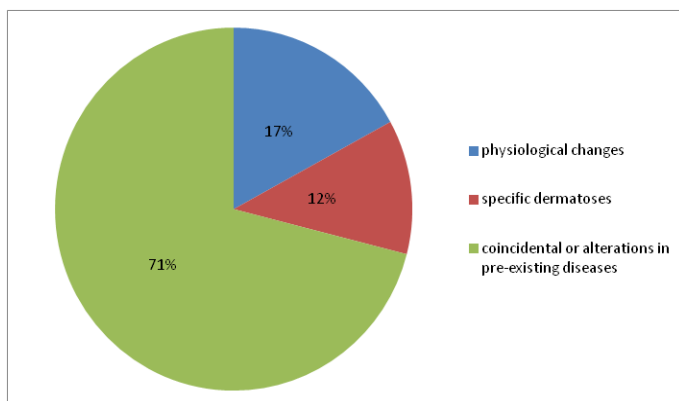


Figure 1 Pregnancy dermatoses groups.



Figure 2 Genital warts.



Figure 3 Varicella during pregnancy.



Figure 4 Measles in pregnancy.



Figure 5 Pustular psoriasis of pregnancy.



Figure 6 (A) Pemphigus foliaceus in pregnancy.



Figure 6 (B) Neonatal pemphigus.



Figure 9 Pemphigoid gestationis (prebullous).



Figure 7 Polymorphic eruption of pregnancy.



Figure 8 Atopic eruption of pregnancy.

Discussion

Pregnancy is characterized by physiological cutaneous changes due to vascular and hormonal effects; they are common and benign as striae gravidarum, chloasma and spider angiomas.³ Seventeen percent of our patients were presented with physiological skin changes related to pregnancy with their main complaints were of cosmetic concern.

The highest number of our cases (69%) presented with coincidental or preexisting diseases which may be modified by pregnancy. As cell mediated immunity is depressed during normal pregnancy, there is an increase in frequency and severity of skin infections.⁴ Infections were the commonest finding in our study (34%); vulvar candidiasis is quite common in pregnancy.⁵ It was reported in 8%. Genital warts are the commonest sexually transmitted disease, they tend to increase in size and number during pregnancy.³ They were the diagnosis in 5%. Chicken pox is a common viral infection, primary infection in the first trimesters of pregnancy may cause intrauterine death or congenital varicella syndrome. Neonatal varicella may occur if infection occurs in the peripartum.⁶ In this study 4 cases were reported with no fetal complications.

Measles is a highly contagious acute viral disease and when measles occurs during pregnancy, maternal and fetal morbidity is increased, 2 cases were reported and complicated with abortion.⁷ Many inflammatory skin diseases were reported in our study including eczema (13%), acne vulgaris (4%), plaque psoriasis (3%) and pustular psoriasis (2%). These diseases may be modified during pregnancy due to immunological changes and the discontinuation of some drugs due to their teratogenic potential. Generalized pustular psoriasis is seen in the last trimester with most patients having a preceding or family history of psoriasis, and with tendency to recurrence. It can cause serious complications to the mother and fetus including maternal hypocalcemia and placental insufficiency. 3 Pemphigus tends to be exacerbated or present for the first time in pregnancy and differentiation from PG is important.⁸ We report 2 cases presented for the first time in pregnancy. The specific dermatoses of pregnancy is a group of disorders often characterized by severe itching with skin lesions of varying morphology, occurring exclusively during pregnancy.² Twelve percent of pregnant women in our study had pregnancy specific dermatoses.

AEP presented with eczematous lesions with personal or family history of atopy and elevated IgE. The disease tends to recur in subsequent pregnancies. It carries no risk for the mother or baby.^{9,10} PEP occurs predominantly in primigravida, multiple gestations and in late pregnancy. Lesions are pleomorphic; urticarial, vesicular and targetoid lesions. The striae on the abdomen are the first to be involved and there is a characteristic periumbilical sparing. Abdominal distension with collagen and elastic fibers damage in striae leads to formation of antigens and triggers inflammatory cascade.^{10,11} It does not usually recur in subsequent pregnancies.²

PG is the most clearly characterized pregnancy dermatosis and the one which also affects the fetal skin.¹² It is an autoimmune bullous disease characterized by pruritic, urticarial plaques with development of tense blisters. The diagnosis is based upon clinical presentation and typical histopathological and IF findings.

Placenta is targeted by the immune responses and fetal complications may occur including prematurity, low birth weight, fetal death and neonatal pemphigoid. The disease shows spontaneous improvement in late gestation but flares may occur at the time of delivery. Recurrence with subsequent pregnancies are often earlier and more severe.^{3,12} We report 6 patients with PG (3%), prematurity was reported in one patient and one third was complicated with fetal mortality.

ICP is a cholestatic disorder characterized by pruritus, elevated liver enzymes and bile acid levels with onset in third trimester. Women with ICP may experience anorexia, fatigue, greasy stools, dark urine, and epigastric discomfort. A deficiency of vitamin K can develop in women who have a prolonged course of ICP. ICP increases the risk of preterm delivery, respiratory distress syndrome and fetal loss. Bile acids passing through the placenta produce vasoconstriction of placental veins, fetal cardiomyocyte dysfunction and abnormal uterine contractility. Pregnancy should be terminated after reaching fetal lung maturity. Spontaneous relief occurs after delivery but ICP may recur with subsequent pregnancies.^{3,13} ICP was reported in 4% and fetal mortality was a complication in 25%.

Conclusions

This study provides important data on the spectrum of pregnancy dermatoses in Libyan patients. Most of the reported pregnancy dermatoses were benign with no adverse effect on the fetus. Pemphigoid gestationis and intrahepatic cholestasis of pregnancy can be a source of significant fetal risk. To the best of our knowledge this is the first study carried out on pregnancy dermatoses in Benghazi, Libya.

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Conflicts of interest

The authors report no conflicts of interest.

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