

A clinical review on Bell's palsy

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Abstract

Bell's palsy in pregnancy and immediate puerperium is a rare complication, has worse prognosis. Certain physiological changes predispose to Bell's Palsy like Pre-eclampsia, Raised cortisol levels, Hypercoagulable state and Impaired sugar levels. Management of Bell's Palsy in these patients is challenging. Efficacy of corticosteroids in facial palsy is proven, however, their use in pregnancy is controversial. This article reviews management of Bell's Palsy in pregnancy.

Key Word: Bell's Palsy, Corticosteroids, Physiological Changes, Pregnancy

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3. Raised cortisol levels in pregnancy leads to immunosuppression. This predisposes to herpes zoster virus re activation.
4. Hypercoagulable state
5. Impaired blood sugar levels

TREATMENT

Facial nerve palsy can be managed medically as well as surgically. Medical management comprises of eye care, corticosteroids, antivirals.

Ophthalmic Management Includes: for corneal protection

1. Preservative free eye drops during the day and ointments during the night
2. Eye taping at night
3. Adequate fluid intake

Corticosteroids: Ashen *et al* concluded that use of corticosteroids in pregnant state is controversial. Corticosteroids are effective in improving recovery and limiting progression of facial palsy. Edwards *et al* reported safety of corticosteroids for management of many medical conditions during pregnancy like severe asthma, rheumatological and dermatological conditions, prevention of respiratory distress syndromes for at risk pregnancies. Ahsen *et al*, Katie *et al*, Wyllie *et al* reported adverse perinatal outcomes associated with use of systemic corticosteroids in pregnancy. These are adrenal suppression, preterm birth, low birth weight, cleft lip, cleft palate. Ahsen *et al* also reported maternal side effects-increased infections, peptic ulcers, exacerbation of

INTRODUCTION

Bell's palsy in pregnancy is a rare but debilitating illness. Hilsinger *et al* determined a frequency of Bell's Palsy in pregnant women at 45.1 per 100,000 births per year, compared to a non-pregnant incidence of 17.4 for the same age group.

Physiological Changes In Pregnancy That Predispose To Facial Nerve Palsy

Ashen *et al*, Shapiro *et al*, Vrabec *et al*, Osterman *et al* reported physiological changes in pregnancy that predispose to facial nerve palsy:

1. Preeclampsia – perineural edema, microemboli, vasospasm or a thrombosis of the vasa nervorum.
2. Hypertension will cause raised extracellular volume that results in perineural edema followed by nerve compression within its bony canal. This may result in carpal tunnel syndrome.

diabetes, osteoporosis, psychosis, fluid retention. Schafer *et al*, Kunze *et al* concluded that breast fed infant is not at risk. Rennick *et al* reported safety of Prednisone and Methylprednisolone during pregnancy as they are rendered inactive by placental barrier. Dexamethasone and Betamethasone reach fetus in considerable amounts.

Dose of prednisolone (Ahsen *et al*)

1. 25mg twice daily for 10 days
2. 60 mgs daily for 5 days followed by a tapering of dose to 10 mgs for 5 days, if tapering is preferred

Blood pressure, body weight, blood sugar level, enquire regarding new infections, gastrointestinal symptoms, sleep/mood disturbances should be monitored in mother while administering systemic corticosteroids. Fetal monitoring should also be undertaken (Ahsen *et al*). Pregnancy state with pre-existent uncontrolled diabetes mellitus, hypertension etc are likely to be worsened by corticosteroid treatment (Ahsen *et al*).

Antivirals: Antivirals like acyclovir, valacyclovir, famcyclovir are prescribed in Ramsay Hunt Syndrome. They are not so effective (Ahsen *et al*, Sullivan *et al*). Immediate surgical management includes nerve decompression and ophthalmic plastic surgery.

Prognosis of bell's palsy in pregnancy: Sullivan *et al* reported early treatment with corticosteroid limit aberrant nerve regeneration and permanent paralysis. Hato *et al* reported pregnancy with complete bell's palsy has bad prognosis as compared to bell's palsy in non pregnant state.

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