Acquired Ocular Toxoplasmosis in Diabetic Pregnancy – a Hidden Monster

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Background

- In India ocular toxoplasmosis is expected to occur through the congenital route, with an index of underestimation for the incidence through the acquired route
- Overall, about 40% of primary maternal infections lead to congenital infection of children, with a transplacental transmission rate of *T gondii* reported to be 3% in the first trimester, 22% in the second, and 63% in the third.
- Ocular toxoplasmosis in pregnancy has been reported in the literature
- Reactivated latent ocular toxoplasmosis during pregnancy may result in decreased vision and floaters
- Toxoplasmic retinochoroiditis is the most common cause of posterior uveitis in immunocompetent patients
- However, acquitted toxoplasmosis is not reported in pregnant women with diabetes

Aims

We describe the management of a case of recurrent ocular toxoplasmosis that presented in the first trimester of pregnancy in a diabetic patient

Presentation

- 27 year old apparently healthy, at 9 weeks' gestation, presented with a 1 week history of blurred vision in the left eye. +ve h/o past ocular problems
- First complicated pregnancy was two years ago which resulted in still born child
- There was a history of cattle at home

Clinical Examination

- Best corrected visual acuities were 6/6 and 6/36 in Right (RE) and Left Eye (LE)
- Anterior segments were normal and the intraocular pressures were 16 mmHg RE, 14 mmHg LE
- Fundoscopy findings- diffuse, elevated white lesion in the left retina half a disc diameter in size located one disc diameter superior to the fovea (Fig 1)
- An area of associated perivascular sheathing and minimal vitreous activity was noted
- An active left retinochoroiditis with associated retinal vasculitis was diagnosed. The right fundus was normal

Serological testing

- Revealed antibodies to *Toxoplasma gondii* at a titre of 1/4096 (2000 IU/ml) using the dye test
- *Toxoplasma* IgM enzyme linked immunosorbent assay (ELISA) on the patient's peripheral blood was positive

Follow Up and Management Course

- At three weeks after presentation (12 weeks gestation) – the visual acuities remain unchanged. However, there was now occlusion of a small retinal arteriole crossing the lesion
- After consultation with the obstetrician and risk-benefit assessment the patient decided to proceed with the pregnancy
- Therapy initiated - oral spiramycin 1 g three times daily
- Eight weeks after presentation (17 weeks gestation) the vision remained the same and the focus of retinochoroiditis was beginning to scar
- Spiramycin continued until the end of pregnancy
- Sequential follow up fetal ultrasounds were normal
- At term the patient gave birth to a healthy baby girl

Post Partum

- Polymerase chain reaction (PCR) and culture for *T gondii* were negative on placental tissue.
- As toxoplasma IgM ELISA, IgM, and IgA ISAGA on cord blood were negative, the positive dye test was probably detecting passively transferred maternal IgG
- The mother's vision remained normal, and only a small, pigmented scar was present (Fig 2).

Fig 1

Fig 2

Discussion

- In our case the features supporting an acquired aetiology, the fresh perspective, included lack of retinal scars from previous infection, and the positive IgM serology and IgG avidity results
- Spiramycin was effective in reducing the risk of transmission to the fetus which may have contributed to the resultant good outcomes, both for both mother and fetus
- Determining an aetiology of acquired *T gondii* infection was important in this patient as it allowed the most appropriate management plan to be initiated resulting in an excellent outcome
- Recurrent ocular toxoplasmosis occurring in pregnancy in a diabetic patient is threatening both to patient and child
- Prompt vigilance with correlation with past history and fundus examination is important

Bibliography

1. Curr Opin Infect Dis. 2019 Oct;32(5):426-434.
2. Front Immunol. 2019 Feb 21;10:285
3. J Fr Ophthalmol. 1980;3(11):679-89
4. J Curr Ophthalmol 2018 Sep; 30(3): 202–210

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