CASE REPORT

Bilateral cystoid macular oedema and cotton wool spots associated with Henoch-Schonlein purpura

Luke Nicholson,¹ Divya Mathews²¹Cardiff Eye Unit, University Hospital Wales, Cardiff, UK²Department of Ophthalmology, Abergele Hospital, Abergele, Conwy, UK**Correspondence to**
Dr Luke Nicholson,
lukenicholson17@gmail.com**SUMMARY**

We report a case of a male patient having bilateral cystoid macular oedema and cotton wool spots associated with Henoch-Schonlein purpura. He presented with decreased vision bilaterally measuring 0.2 (6/9.5) on the right and 0.5 (6/19) on the left. He has chronic hypertension with blood pressure averaging 150/90. His blood pressure was raised at 180/110 and with treatment reduced to 164/99. There were no other signs of malignant hypertensive retinopathy. He was treated with oral prednisolone and noticed a significant improvement the following day. An objective measurement performed 2 days later was -0.10 (6/4.8) bilaterally with resolution of macular oedema.

BACKGROUND

Henoch-Schonlein purpura is an acute immunoglobulin A-mediated leucocytoclastic vasculitis.¹ It usually presents with purpura, abdominal pain and nephritis. Ocular involvement has been very rare with only four reported cases of ophthalmological involvement. These include keratitis and granulomatous uveitis in one patient² unilateral anterior ischaemic optic neuropathy³ bilateral central retinal artery occlusion⁴ and finally subperiosteal orbital haematoma.⁵

CASE PRESENTATION

We report a case of bilateral cystoid macular oedema and cotton wool spots in association with Henoch-Schonlein purpura (HSP).

A 24-year-old man presented to the eye unit with acute onset painless blurred vision. He has been previously diagnosed with HSP 3 years ago following symptoms of abdominal pain and purpura. This was then confirmed by a renal biopsy.

At presentation, he was on a maintenance dose of 2.5 mg of oral prednisolone. He has end-stage renal failure and is on continuous ambulatory peritoneal dialysis and awaiting a renal transplant. He also suffers from chronic hypertension (average 150/90) and was treated with long-term antihypertensives.

On examination, his visual acuity was 0.20 logMAR (6/9.5 Snellen) on the right eye and 0.50 logMAR (6/19) on the left. The anterior chamber was quiet. There were cotton wool spots in the posterior pole bilaterally (figure 1) as well as macular oedema.

INVESTIGATIONS

Optical coherence tomography (OCT) confirmed macular oedema. His blood pressure on admission was raised to 180/100 when admitted under the renal team a day before he presented to us. Treatment was initiated and his blood pressure returned to 164/99 prior to him presenting to our unit. He also had associated abdominal pains owing to his HSP flare up.

Figure 1 Colour fundus of both eyes at presentation showing multiple cotton wool spots in the posterior pole.

To cite: Nicholson L, Mathews D. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2013-200159

Figure 2 Optical coherence tomography image of macula in both eyes confirming macular oedema with corresponding image of macula 3 days later following treatment with oral steroids.

DIFFERENTIAL DIAGNOSIS

Bilateral cystoid macular oedema and cotton wool spots secondary to flare up of HSP and hypertensive retinopathy were our two differential diagnoses.

TREATMENT

The patient was started on oral prednisolone 60 mg once a day.

OUTCOME AND FOLLOW-UP

The patient noticed a significant improvement the following day and when reviewed 3 days later, his visual acuity was -0.10 bilaterally with significant reduction in macular oedema as demonstrated by the OCT images (figure 2).

DISCUSSION

There were minimal retinal haemorrhages. Funduscopy findings were predominantly of cotton wool spots and macular oedema as in figure 1. Furthermore, following the start of oral steroids, he noticed a dramatic improvement in vision the following day with resolution of the macular oedema when assessed 2 days later. His blood pressure was only reduced by 16 mm Hg systolic and 11 mm Hg diastolic. It is therefore believed that this was unlikely to be hypertensive retinopathy and more in keeping with a direct effect of the flare up of his HSP mediated by a leucocytoclastic vasculitis.¹ However, given the raised blood pressure, antihypertensive treatment must not be forgotten as well.

Learning points

- ▶ Henoch-Schönlein purpura may present with a variety of systemic symptoms and signs whereby the attending clinician needs to be aware of the possible multisystem involvement.
- ▶ Patients with a flare up of Henoch-Schönlein purpura with visual disturbances requires urgent ophthalmology review as early treatment of macular oedema results in fairly immediate resolution of symptoms.
- ▶ Other differential diagnoses such as hypertension-related retinopathy must also be considered and significantly raised blood pressure treated.

Contributors LN obtained images and consent from patient. DM contributed to the ideas and content of the article.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Saulsbury FT. Henoch-Schönlein purpura. *Pediatric Dermatol* 1984;1:195–201.
- 2 Yamabe H, Ozawa K, Fukushi K, et al. Ig A nephropathy and Henoch-Schönlein purpura nephritis with anterior uveitis. *Nephron* 1988;50:366–70.
- 3 Chuah J, Meaney T. Anterior ischaemic optic neuropathy secondary to Henoch-Schönlein purpura. *Eye* 2005;19:1028.
- 4 Wu TT, Sheu SJ, Chou LC. Henoch-Schönlein purpura with bilateral central retinal artery occlusion. *Br J Ophthalmol* 2002;86:351–2.
- 5 Ma'luf RN, Zein WM, El Dairi MA, et al. Bilateral subperiosteal orbital hematomas and Henoch-Schönlein purpura. *Arch Ophthalmol* 2002;120:1398–9.

Copyright 2013 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow