percent of GCA patients received osteoporosis prevention (other than calcium supplementation). There was variation depending on the treating specialty, 80% (12/15) of rheumatology-treated patients and 25% (2/8) of ophthalmology-treated patients receiving therapy. Hart and Green in 2002 found that 64.7% of inpatients who qualified for osteoporosis prophylaxis for steroid-induced osteoporosis were not treated appropriately.

Although awareness of the significance of corticosteroid-induced osteoporosis seems to be increasing, there is still much room for improvement. Any patient receiving a larger dose than 7.5 mg/day of corticosteroids for more than 3 months should receive bisphosphonate therapy. If this therapy is neglected, the development of osteoporosis can lead to significant patient morbidity.

REFERENCES


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Vitritis and retinal vasculitis as presenting signs of monoclonal gammopathy of unknown significance with progression to multiple myeloma

Monoclonal gammopathy of unknown significance (MGUS) is a premalignant hematological condition characterized by monoclonal plasma cell proliferation in the bone marrow. Patients with this condition are often asymptomatic. However, because of the risk of malignant progression to multiple myeloma, prompt recognition and diagnosis of MGUS is crucial for proper follow-up in these patients.

A 61-year-old-male presented with a 3-month history of worsening floaters and slightly blurred vision in his right eye. He was otherwise asymptomatic on review of systems. His medical history was significant for hypertension and chronic smoking. On examination, best-corrected vision was 20/20 bilaterally. Anterior segment examination showed mild posterior subcapsular cataract in the asymptomatic left eye. Dilated fundus examination revealed a moderate amount of free-floating snowball condensates with inferior clumping in the right eye vitreous. There was perivascular sheathing involving arterioles and venules in midperipheral regions bilaterally, but more extensively in the right eye. A preliminary diagnosis of vitritis and retinal vasculitis was made.

Fluorescein angiography was performed, which did not add to the clinical findings. Further investigations included negative tuberculosis skin test, normal chest x-ray, and negative syphilis serology. Rheumatologic work-up (rheumatoid factor, C3, C4, antinuclear antibodies, and cytoplasmic and perinuclear antineutrophil cytoplasmic antibodies) was also within normal limits. Serum protein electrophoresis, however, revealed an abnormal spike in the distal gamma region, containing monoclonal immunoglobulin G lambda. The patient was therefore referred to a hematologist, and a diagnosis of MGUS was confirmed. Given his ocular findings, he was started on topical prednisolone 1% qid both eyes. During follow-up, he continued to have intermittent vitritis of the right eye and persistent mild retinal vasculitis bilaterally. He was followed every 6 months by a hematologist to monitor his blood work, which remained stable.

Three years after the diagnosis of MGUS, the patient presented to the emergency department with significant weight loss, low back pain, hypercalcemia, and acute renal failure. Skeletal survey revealed multiple lytic lesions in the skull, right femur, and hip. Bone marrow biopsy showed plasma cell dyscrasia. A diagnosis of multiple myeloma was made and chemotherapy was initiated. His vitritis and retinal vasculitis gradually resolved.

Corneal lattice dystrophy and copper deposits in Descemet membrane have been reported as initial ophthalmic findings in MGUS. Our patient presented with vitritis and retinal vasculitis with no corneal abnormalities. We hypothesize that the overproduction of immunoglobulins in MGUS resulted in secondary amyloidosis in our patient, because both vitritis and retinal vasculitis have been reported in hereditary amyloidosis. In retrospect, a vitreous tap could have been performed to confirm if amyloid material was present. To our knowledge, this is the first report of vitritis and retinal vasculitis as presenting signs of MGUS.
In our patient, malignant progression of MGUS occurred 3 years after initial diagnosis. The annual risk of transformation from MGUS to multiple myeloma has been reported as approximately 1%. Because of this life-long risk of malignancy, recognition of the presenting signs of MGUS is essential to ensure careful investigations and follow-up. Essentially, MGUS should be added to the differential diagnosis of vitritis and retinal vasculitis.

REFERENCES


**Regression of soft drusen and drusenoid pigment epithelial detachment following intravitreal anti-vascular endothelial growth factor therapy**

Drusenoid pigment epithelial detachment (PED), defined as half a disc diameter or greater of confluent drusen under the central macula, and soft confluent macular drusen are considered a precursor to choroidal neovascularization (CNV). Treatment of soft confluent drusen has been attempted in the hope that this may reduce the risk of CNV. Argon laser photocoagulation showed a significant decrease in drusen in treated eyes but no significant CNV reduction.

We describe 3 eyes of 2 patients who demonstrated a regression of drusenoid PEDs and surrounding soft confluent drusen following treatment with intravitreal anti-vascular endothelial growth factor (VEGF) therapy.

A 65-year-old woman (patient 1) with bilateral, soft, confluent drusen and drusenoid PED developed right metamorphopsia. Fluorescein angiography and optical coherence tomography showed small extrafoveal occult CNV lesions on the right (Figs. 1 and 2). She underwent 3 right intravitreal bevacizumab injections, followed by 2 in

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**Fig. 1**—Fundus photographs and fluorescein angiography (FFA) images of patient 1. Top: Shortly before intravitreal bevacizumab. Middle: Preoperative FFA of the right and left macula showing small inferior areas of faint hyperfluorescence in the right eye, indicating leakage. Bottom: Eight months after 3 intravitreal bevacizumab injections in the right eye and 2 in the left eye.

**Fig. 2**—Optical coherence tomography appearance of right eye in patient 1 before treatment (top) and after treatment (bottom).